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ABSTRACT

This report presents findings from a national survey of secondary and postsecondary institutions offering vocational education that sought to determine state and local response to the Carl D. Perkins Vocational Education Act. The study involved qualitative case studies of state and local programs as well as a national survey of local vocational providers designed to gather information about current vocational education practices. Containing 83 tables and graphs, the report includes information in the following areas: (1) description of districts and institutions offering vocational education; (2) amount of Perkins' dollars spent in 1986-87; (3) how Perkins' funds are spent by districts and institutions; (4) supplemental services for handicapped and disadvantaged secondary students; (5) changes in student enrollments in vocational education 1982-83 to 1986-87; (6) changes in vocational courses 1982-83 to 1986-87; and (7) vocational education and the Job Training Partnership Act. An introductory overview summarizes results in these seven areas of research. The survey instruments are appended. (KC)

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# STATE AND LOCAL RESPONSE TO THE CARL D. PERKINS ACT

## SURVEY ANALYSIS

Final Report

Janet P. Swartz

January 27, 1989

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Janet P. Swartz

January 27, 1989

Prepared for:

National Assessment of Vocational Education
U.S. Department of Education
400 Maryland Avenue, S.W.
Washington, D.C. 20202

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Recognition is also due the study's Advisory Panel, who provided valuable comments in designing and fine-tuning the survey instruments and also reviewed initial survey results. The members of the Advisory Panel included: Mr. Carrol Burchinal, Executive Officer and Director of Vocational Education in North Dakota; Dr. Patricia Flynn, Professor of Economics at Bentley College; Ms. Phyllis McClure of the NAACP Legal Defense and Educational Fund; Dr. Marvin Lazarson, Dean of the Graduate School of Education at the University of Pennsylvania; Dr. Robert Sorensen, Executive Officer and State Director of the Wisconsin Board of Vocational, Technical and Adult Education; and the late Dr. Gordon Ascher, Assistant Commissioner of Education in the Division of Vocational Education for the State of New Jersey.

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Janet P. Swartz
Survey Director

TABLE OF CONTENTS


| | | Page |
|---|---|---|
| 1.0 | OVERVIEW AND SUMMARY OF RESULTS | 1 |
| | 1.1 Introduction | 1 |
| | 1.2 Purpose of the Survey | 2 |
| | 1.3 Survey Procedures | 4 |
| | 1.4 Response Rate and Potential Response Bias | 7 |
| | 1.5 Creating National Estimates | 9 |
| | 1.6 Summary of Results | 10 |
| 2.0 | DESCRIPTION OF DISTRICTS AND INSTITUTIONS OFFERING VOCATIONAL EDUCATION | 21 |
| | 2.1 Introduction | 21 |
| | 2.2 Size of Districts and Institutions | 21 |
| | 2.3 Vocational Programs and Activities | 34 |
| | 2.4 Vocational Programs Offered | 39 |
| | 2.5 Goals of Vocational Education | 42 |
| | 2.6 High School Graduation Requirements | 48 |
| | 2.7 Summary and Conclusions | 53 |
| 3.0 | AMOUNT OF PERKINS' DOLLARS SPENT IN 1986-87 | 57 |
| | 3.1 Introduction | 57 |
| | 3.2 Districts and Institutions Spending Perkins' Funds During 1986-87 | 60 |
| | 3.3 Amount of Perkins' Funds Spent by Districts and Institutions | 81 |
| | 3.4 Perkins' Funds Carried Over or Returned to the State | 98 |
| | 3.5 Summary and Conclusions | 102 |
| 4.0 | HOW PERKINS' FUNDS ARE SPENT BY DISTRICTS AND INSTITUTIONS | 107 |
| | 4.1 Introduction | 107 |
| | 4.2 Percentage Distribution of Perkins' Funds | 108 |
| | 4.3 Prevalence of Spending Funds | 127 |
| | 4.4 Combining Perkins' Funds at the Postsecondary Level | 137 |
| | 4.5 Summary and Conclusions | 137 |

TABLE OF CONTENTS
(continued)


5.0 SUPPLEMENTAL SERVICES FOR HANDICAPPED AND DISADVANTAGED SECONDARY STUDENTS..... 143

5.1 Introduction..... 143
5.2 Proportion of Handicapped and Disadvantaged Students Receiving Supplemental Services..... 144
5.3 Supplemental Services Related to Spending Perkins' Funds..... 155
5.4 Supplemental Services and Size of Perkins' Expenditure..... 169
5.5 Supplemental Services and School and District Size..... 170
5.6 Summary and Conclusions..... 170

6.0 CHANGES IN STUDENT ENROLLMENTS IN VOCATIONAL EDUCATION 1982-83 TO 1986-87..... 173

6.1 Introduction..... 173
6.2 Changes in Handicapped and Disadvantaged Enrollments..... 173
6.3 Changes in Total Vocational Enrollments..... 179
6.4 Enrollment Changes in Vocational Programs..... 189
6.5 Summary and Conclusions..... 192

7.0 CHANGES IN VOCATIONAL COURSES 1982-83 TO 1986-87..... 195

7.1 Introduction..... 195
7.2 Changes in Vocational Offerings..... 195
7.3 Reasons for Expanding Vocational Programs..... 199
7.4 Reasons for Reducing Vocational Programs..... 203
7.5 Changes in Course Content, Supplemental Services and Other Program Activities..... 208
7.6 Summary and Conclusions..... 210

8.0 VOCATIONAL EDUCATION AND THE JOB TRAINING PARTNERSHIP ACT (JTPA)..... 217

8.1 Introduction..... 217
8.2 Proportion of Districts and Institutions Receiving JTPA Funds..... 217
8.3 Amount of JTPA Funds Received by Category in 1986-87..... 219
8.4 Total Amount of JTPA Funds Received in 1986-87..... 222
8.5 Relationship Between JTPA Funds and Perkins' Funds..... 225
8.6 Coordinated Activities at Postsecondary Institutions... 228
8.7 Acceptance of Performance-Based Contracts..... 228
8.8 Summary and Conclusions..... 231

## LIST OF EXHIBITS


| | | Page |
|---|---|---|
| Exhibit 1.1 | Characteristics of Survey Respondents and Nonrespondents in School Districts..... | 8 |
| Exhibit 2.1 | National Estimates of Student Enrollment Figures During 1986-87 in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions Offering Vocational Education..... | 23 |
| Exhibit 2.2 | National Estimates of Distribution of Student Enrollment Figures for 1986-87 in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions Offering Vocational Education..... | 26 |
| Exhibit 2.3 | National Estimates of Changes in Student Enrollments from 1982-83 to 1986-87 in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions Offering Vocational Education..... | 28 |
| Exhibit 2.4 | Distribution of Changes in Student Enrollments from 1982-83 to 1986-87 in School Districts, Secondary Area Vocational Schools, and Postsecondary Institutions Offering Vocational Education..... | 30 |
| Exhibit 2.5 | National Estimates of Number and Type of High Schools Offering Vocational Programs in School Districts..... | 32 |
| Exhibit 2.6 | National Estimates of Student Enrollments Classified by Whether the District Sends Students to an Area Vocational School (AVS)..... | 33 |
| Exhibit 2.7 | National Estimates of Total Number of Faculty and Vocational Faculty in Postsecondary Institutions During 1986-87..... | 35 |
| Exhibit 2.8 | National Estimates of Groups Actively Recruited for Vocational Programs by Postsecondary Institutions..... | 36 |
| Exhibit 2.9 | National Estimates of Students Involved in Vocational Programs Run by Postsecondary Institutions in Cooperation with Other Agencies During 1986-87..... | 38 |
| Exhibit 2.10 | National Estimates of Vocational Course Offerings in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions..... | 41 |
| Exhibit 2.11 | National Estimates of Goals of Vocational Education in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions..... | 44 |

| | | Page |
|---|---|---|
| Exhibit 2.12 | National Estimates of Core Course Requirements in School Districts During 1982-83 and 1986-87..... | 50 |
| Exhibit 2.13 | National Estimates of Changes in District Graduation Requirements from 1982-83 to 1986-87..... | 52 |
| Exhibit 3.1 | National Estimates of Percentage of School Districts and Secondary Area Vocational Schools (AVS) with Handicapped, Disadvantaged and Limited-English-Proficient Students Enrolled in Vocational Education During 1986-87..... | 62 |
| Exhibit 3.2 | National Estimates of Percentage of School Districts and Secondary Area Vocational Schools (AVS) Spending Perkins' Funds During 1986-87..... | 64 |
| Exhibit 3.3 | National Estimates of Percentage of Postsecondary Institutions Spending Perkins' Funds During 1986-87.... | 66 |
| Exhibit 3.4 | Comparing Percentage of Secondary and Postsecondary Providers Spending Perkins' Funds During 1986-87..... | 68 |
| Exhibit 3.5 | National Estimates of Reasons Perkins' Funds Not Received by School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions in 1986-87..... | 70 |
| Exhibit 3.6 | National Estimates of Student Enrollments in Districts and Institutions Spending Perkins' Funds During 1986-87..... | 73 |
| Exhibit 3.7 | National Estimates of Percentages of Urban, Suburban and Rural School Districts Spending Perkins' Funds During 1986-87..... | 75 |
| Exhibit 3.8 | National Estimates of Percentage of Children Below the Poverty Level in School Districts Spending Perkins' Funds..... | 77 |
| Exhibit 3.9 | National Estimates of Percentage of Nonwhites in School Districts Spending Perkins' Funds..... | 78 |
| Exhibit 3.10 | National Estimates of Percentage of Pell Grants Awarded in Community Colleges and Other Postsecondary Institutions Spending Perkins' Funds..... | 80 |
| Exhibit 3.11 | National Estimates of Amount of Perkins' Funds Spent in 1986-87 by School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions.... | 82 |

| | | Page |
|---|---|---|
| Exhibit 3.12 | National Estimates of Total Perkins' Dollars Spent During 1986-87 by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions..... | 88 |
| Exhibit 3.13 | National Estimates of Percentage of School Districts, Secondary Area Vocational Schools (AVS) and Post-secondary Institutions Reporting No Perkins' Funds Spent During 1986-87..... | 91 |
| Exhibit 3.14 | National Estimates of Student Enrollments in Districts and Institutions Spending and Not Spending Any Perkins' Funds During 1986-87..... | 93 |
| Exhibit 3.15 | Percentage of Students in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions Not Spending Perkins' Funds During 1986-87..... | 94 |
| Exhibit 3.16 | National Estimates of Total Perkins' Dollars Spent Per Pupil During 1986-87 in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions..... | 96 |
| Exhibit 3.17 | National Estimates of Handicapped and Disadvantaged Funds Carried Over Into 1987-88 and Returned to the State in 1986-87..... | 99 |
| Exhibit 3.18 | Reasons for Unspent Handicapped and Disadvantaged Funds in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions..... | 101 |
| Exhibit 4.1 | National Estimates of How Handicapped Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87..... | 110 |
| Exhibit 4.2 | National Estimates of How Disadvantaged Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87..... | 113 |
| Exhibit 4.3 | National Estimates of How Limited-English-Proficient Funds Were Spent by School Districts and Secondary Area Vocational Schools in 1986-87..... | 116 |
| Exhibit 4.4 | National Estimates of How Adult Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87..... | 118 |
| Exhibit 4.5 | National Estimates of How Single Parent/Homemaker Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87..... | 120 |

| | | Page |
|---|---|---|
| Exhibit 4.6 | National Estimates of How Sex Equity Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87..... | 123 |
| Exhibit 4.7 | National Estimates of How Program Improvement Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87..... | 125 |
| Exhibit 4.8 | Handicapped Funds: Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions Spending Any Perkins' Funds for Each Category of Program Activities..... | 128 |
| Exhibit 4.9 | Disadvantaged Funds: Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions Spending Any Perkins' Funds for Each Category of Program Activities..... | 130 |
| Exhibit 4.10 | Limited-English-Proficient Funds: Percent of Districts and Secondary Area Vocational Schools Spending Any Perkins' Funds for Each Category of Program Activities..... | 131 |
| Exhibit 4.11 | Adult Funds: Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions Spending Any Perkins' Funds for Each Category of Program Activities..... | 132 |
| Exhibit 4.12 | Single Parent/Homemaker Funds: Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions Spending Any Perkins' Funds for Each Category of Program Activities..... | 134 |
| Exhibit 4.13 | Sex Equity Funds: Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions Spending Any Perkins' Funds for Each Category of Program Activities..... | 135 |
| Exhibit 4.14 | Program Improvement Funds: Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions Spending Any Perkins' Funds for Each Category of Program Activities..... | 136 |
| Exhibit 4.15 | National Estimates of Percentage of Postsecondary Institutions Combining Perkins' Funds in 1986-87..... | 138 |
| Exhibit 5.1 | National Estimates of Supplemental Services for Handicapped Vocational Students in School Districts and Secondary Area Vocational Schools (AVS)..... | 145 |

| | | Page |
|---|---|---|
| Exhibit 5.2 | National Estimates of Supplemental Services for Academically Disadvantaged Vocational Students in School Districts and Secondary Area Vocational Schools (AVS) | 147 |
| Exhibit 5.3 | National Estimates of Supplemental Services for Economically Disadvantaged Vocational Students in School Districts and Secondary Area Vocational Schools (AVS) | 151 |
| Exhibit 5.4 | National Estimates of Supplemental Services for Limited-English-Proficient (LEP) Vocational Students in School Districts and Secondary Area Vocational Schools (AVS) | 153 |
| Exhibit 5.5 | National Estimates of Relationship Between Supplemental Services for Handicapped Vocational Students and Spending Perkins' Handicapped Funds in School Districts and Secondary Area Vocational Schools (AVS) | 156 |
| Exhibit 5.6 | National Estimates of Relationship Between Supplemental Services for Academically Disadvantaged Vocational Students and Spending Perkins' Disadvantaged Funds in School Districts and Secondary Area Vocational Schools (AVS) | 160 |
| Exhibit 5.7 | National Estimates of Relationship Between Supplemental Services for Economically Disadvantaged Vocational Students and Spending Perkins' Disadvantaged Funds in School Districts and Secondary Area Vocational Schools (AVS) | 164 |
| Exhibit 5.8 | National Estimates of Relationship Between Supplemental Services for Limited-English-Proficient (LEP) Vocational Students and Spending Perkins' LEP Funds in School Districts and Secondary Area Vocational Schools (AVS) | 167 |
| Exhibit 6.1 | National Estimates of Changes in Handicapped and Disadvantaged Enrollments in Vocational Education 1982-83 to 1986-87 | 175 |
| Exhibit 6.2 | Relationship Between Vocational Enrollment and Handicapped Enrollment Patterns | 176 |
| Exhibit 6.3 | Relationship Between Vocational Enrollment and Disadvantaged Enrollment Patterns | 178 |
| Exhibit 6.4 | National Estimates of Changes in Overall Vocational Enrollments 1982-83 to 1986-87 | 180 |

| | | Page |
|---|---|---|
| Exhibit 6.5 | Relationship between Total District/Institution Enrollment Changes and Vocational Enrollment Patterns | 181 |
| Exhibit 6.6 | Reasons Related to Increases in Overall Vocational Enrollments at Postsecondary Institutions | 183 |
| Exhibit 6.7 | Reasons Related to Decreases in Overall Vocational Enrollments at Postsecondary Institutions | 184 |
| Exhibit 6.8 | Reasons Related to Decreases in Overall Vocational Enrollments in School Districts and Secondary Area Vocational Schools (AVS) | 186 |
| Exhibit 6.9 | Actual Changes in District Graduation Requirements in Relation to Citing This as a Reason for Declines in Vocational Enrollments | 187 |
| Exhibit 6.10 | National Estimates of Enrollment Changes in Vocational Programs in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions | 190 |
| Exhibit 7.1 | National Estimates of Changes in Vocational Course Offerings 1982-83 to 1986-87 | 196 |
| Exhibit 7.2 | Reasons for Expanding Vocational Course Offerings in School Districts | 200 |
| Exhibit 7.3 | Reasons for Expanding Vocational Course Offerings in Secondary Area Vocational Schools | 202 |
| Exhibit 7.4 | Reasons for Expanding Vocational Course Offerings in Postsecondary Institutions | 204 |
| Exhibit 7.5 | Reasons for Reducing Vocational Course Offerings in School Districts | 205 |
| Exhibit 7.6 | Reasons for Reducing Vocational Course Offerings in Secondary Area Vocational Schools | 207 |
| Exhibit 7.7 | Reasons for Reducing Vocational Course Offerings in Postsecondary Institutions | 209 |
| Exhibit 7.8 | Changes Over the Last Five Years in Course Content, Supplemental Services and Other Program Activities in School Districts | 211 |
| Exhibit 7.9 | Changes Over the Last Five Years in Course Content, Supplemental Services and Other Program Activities in Secondary Area Vocational Schools | 212 |

| | | Page |
|---|---|---|
| Exhibit 7.10 | Changes Over the Last Five Years in Course Content, Supplemental Services and Other Program Activities in Postsecondary Institutions..... | 213 |
| Exhibit 8.1 | Relative Participation Rates Among Districts, Secondary Area Vocational Schools (AVS), and Postsecondary Institutions Receiving Funds from the Job Training Partnership Act (JTPA)..... | 218 |
| Exhibit 8.2 | National Estimates of Funds Received from the Job Training Partnership Act (JTPA) in 1986-87 by School Districts, Secondary Area Vocational School (AVS) and Postsecondary Institutions..... | 220 |
| Exhibit 8.3 | National Estimates of Total Funds Received from the Job Training Partnership Act (JTPA) by Districts, Secondary AVS and Postsecondary Institutions..... | 223 |
| Exhibit 8.4 | National Estimates of Total Amounts of Funds Received from the Job Training Partnership Act (JTPA) per Student Enrolled in School Districts, Secondary AVS and Postsecondary Institutions..... | 224 |
| Exhibit 8.5 | National Estimates of School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions Receiving Perkins' Funds and Funds from the Job Training Partnership Act (JTPA)..... | 226 |
| Exhibit 8.6 | Relationship Between Total JTPA Funds and Total Perkins' Funds During 1986-87 in Districts, Secondary AVS and Postsecondary Institutions..... | 227 |
| Exhibit 8.7 | Activities at Postsecondary Institutions Run Cooperatively Between Vocational Education and Programs of the Job Training Partnership Act (JTPA)..... | 229 |
| Exhibit 8.8 | Reasons Why Performance-Based Funding is Not Accepted by School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions..... | 230 |

# 1.0 OVERVIEW AND SUMMARY OF RESULTS

## 1.1 Introduction

The Carl D. Perkins Vocational Education Act, signed into law in October, 1984, was intended to amend and clarify federal vocational education policy as defined by the Vocational Education Act of 1963. The Perkins Act (PL 98-524) had two primary objectives: (1) to assure access to quality vocational education programs for individuals who are inadequately served by vocational education, and (2) to expand, improve and modernize vocational education programs in the United States.

Title IV, Section 403 of the Perkins Act required the U.S. Department of Education to conduct independent studies and analyses of the programs funded through this legislation. This assessment was to include descriptions and evaluations of vocational education across the country, including the vocational activities and services funded by the Perkins Act, the changes in vocational education since the passage of the law, and the coordination of vocational education with employment and training activities. To carry out this mandate, the Department of Education established the National Assessment of Vocational Education (NAVE) to gather information about current vocational educational practices.

This study of the state and local response to the Perkins Act, conducted by Abt Associates, is one of several major studies commissioned by NAVE. The study involved qualitative case studies of state and local practices as well as a national survey of local vocational providers. Results will be used by NAVE as it prepares its report to Congress. In addition, study reports will be provided to Congress as it deliberates the reauthorization of the Perkins Act.

This report presents findings from a national survey of secondary and postsecondary institutions offering vocational education. A companion volume* contains the results of case studies conducted in nine state and twenty-seven communities.

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*Millsap, M.A., Wood, C., Jastrzab, J., and Marden, C. (1989). State and Local Response to the Perkins Act: Case Study Analysis. Cambridge, MA: Abt Associates Inc.

In this chapter, we describe the development and conduct of the surveys as well as the selection of the nationally representative sample of local vocational providers. The last section of the chapter presents a summary of major findings.

## 1.2 Purpose of the Survey

Since there had been no systematic collection of information from local vocational providers since the passage of the Perkins Act, NAVE contracted with Abt Associates to conduct a national survey of vocational education practices at the secondary and postsecondary levels. The purpose of the survey was to collect systematic, descriptive information from local providers about the use of Perkins' funds and about general changes in vocational education.

Two surveys were developed, one for the secondary level and another for the postsecondary level. The two questionnaires contain many common questions to enable a comparison between vocational educational programs and services at the two education levels. However, each survey also has unique questions that address issues specific to secondary and postsecondary education.

Five general topics for survey questions were identified by the National Assessment of Vocational Education as key to their information needs:

- General information about vocational providers;
- Activities undertaken with Perkins' Title IIA and IIB funding;
- Difficulties associated with specific requirements of the legislation;
- Changes in vocational education over the last five years; and
- Vocational education and the Job Training Partnership Act (JTPA).

General information about vocational providers was important in order to describe the sample of respondents as well as to discuss the context of vocational education at the local level. Questions focused on the number of students, size of vocational budget, and goals of vocational education in

districts and institutions. In addition, on the secondary survey, information was obtained about high school graduation requirements.

The Perkins Act directed states to apportion the Basic State Grants (Title II monies) from the federal government in the following way: 57% to the Vocational Education Opportunities Program (Title IIA) to fund programs for special populations; and 43% to the Vocational Education Improvement, Innovation and Expansion Program (Title IIB) to expand or develop high quality education programs. The special populations targeted for Title IIA funds included: handicapped students; disadvantaged students, encompassing academically disadvantaged, economically disadvantaged and limited-English-proficient students; adults in need of training or retraining; single parents/homemakers; and individuals participating in programs designed to promote sex equity in vocational education. The major purpose of the surveys was to describe the amount of Title IIA and IIB funds spent and the ways in which districts and institutions used these federal vocational education dollars.

The Perkins Act mandated that the federal dollars for handicapped and disadvantaged students could be used only for the additional or excess costs of supplemental services or programs for these students. In addition, the law required that the Title IIA funds for disadvantaged, handicapped and adults as well as the Title IIB funds for program improvement must be matched either by state or local funds. In order to look at the impact of these restrictions on local vocational providers, the survey included several questions asking whether the excess cost and matching requirements affected a district's or institution's ability to access and utilize these federal vocational dollars.

To address Congress' request to collect information about the status of vocational education across the country, a series of survey questions focused on changes in vocational education in three areas: (1) student enrollments, (2) vocational course offerings, and (3) course content, supplemental services and other program activities. Since public education in general has undergone widespread changes over the last five years as a result of the education reform movement, these questions asked about changes between the 1982-83 and 1986-87 school years.

The last section of each survey focused on funding from the Job Training Partnership Act (JTPA). Questions addressed the amount of funds received by districts and institutions and whether expenditures were related to vocational education. This information was collected in order to explore the extent of coordination between vocational education and JTPA programs, as well as to calculate the relationship between JTPA funding and funding from the Perkins Act.

## 1.3 Survey Procedures

This section discusses briefly the development and pretest of the questionnaires as well as the sample selection procedures. In addition, the timeframe of the survey mail-out is described, along with the efforts undertaken to maximize the response rate.

### Survey Development

Several groups of individuals were consulted during the development of the two survey instruments, and their comments and suggestions were incorporated into successive revisions of the questionnaires. In addition to staff from the National Assessment of Vocational Education, members of the study's Advisory Panel, representing state directors of vocational education as well as researchers in vocational education, reviewed both questionnaires. The surveys also were sent to a number of state directors, to state administrators involved in collecting vocational data from local education agencies, and to nationally known researchers in vocational education.

The secondary survey was field-tested in seven sites across four states. These pretest sites included districts with comprehensive high schools offering vocational education as well as secondary area vocational schools, and represented large, urban schools and smaller suburban districts. The postsecondary survey was field-tested at four sites in two states, and included community colleges as well as postsecondary area vocational schools.

The final version of the secondary survey was reviewed and approved by the Committee on Education Information Systems (CEIS) within the Council of Chief State School Officers. Both the secondary and postsecondary

questionnaires were approved by the federal Office of Management and Budget (OMB).

Sample Design

In order order to fully describe vocational education practices at the secondary and postsecondary level, we were interested in obtaining survey data from three types of local providers: school districts, area vocational schools and postsecondary institutions offering vocational education. We did not include for-profit or proprietary schools that offer vocational training.

The potential respondents for the secondary survey included public school districts or local education agencies (LEAs) that provide vocational education in grades 9-12 as well as area vocational schools (AVS) that are administered separately from school districts. School districts may offer vocational education at comprehensive high schools (i.e., offer a full range of academic and vocational courses) and/or at vocational high schools in the district (i.e., primarily offer vocational education). In contrast, area vocational schools (AVS) offer vocational education to students from a number of "sending" school districts. In this study, the AVS targeted were those administered separately from school districts, usually by a separate director or superintendent and often by their own Board of Education.

At the postsecondary level, we were interested in community colleges, postsecondary area vocational schools, technical institutes, and four-year colleges or universities offering prebaccalaureate vocational programs. Since we excluded colleges and universities that do not offer prebaccalaureate vocational programs, it is important to keep in mind that as we talk about results from the postsecondary survey, we are not describing all possible types of postsecondary institutions.

In order to obtain national estimates, initial samples of 1500 secondary providers and 500 postsecondary providers were selected in a stratified two-stage cluster design. In the first stage, eighteen states were selected from among all states in the country. The second stage of sampling involved selecting districts and institutions from within these states.

The eighteen states were selected on the basis of total vocational enrollments as reported by the National Center for Education Statistics. The

seven largest states in terms of enrollment were selected with certainty. The remaining non-certainty states were selected through probability proportional to size sampling based on four stratification variables: census region, total per pupil expenditures, percent of students in postsecondary education and changes over the last five years in core course requirements for high school graduation. These variables were selected to yield a nationally representative sample on key issues of importance to vocational education. Because the number of strata exceeded the sample size of non-certainty states, the method of controlled selection was used to allocate the sample to the strata.

Once the eighteen states were selected, individual districts and postsecondary institutions were selected based on vocational enrollments obtained from state education offices. Using these enrollment data, cases were selected through probability proportional to size sampling so that a greater number of large districts and institutions would be included in the sample. Since the number of AVS in the 18 sample states was small, we selected all of the AVS in order to be able to obtain reliable data for this group of secondary providers.

The secondary sample totaled 1502, including 1121 school districts and 381 area vocational schools. The postsecondary sample included 502 institutions.

Survey Mail-out and Follow-up

The secondary and postsecondary surveys were mailed to respondents during the first week of April, 1988. Two weeks later a postcard was sent to all respondents. This served as a notification that a survey had been mailed, so that if it had not been received another could be sent, and as a reminder to complete the questionnaire. As a result of telephone calls from respondents, approximately 150 surveys were sent out in a second mailing.

One month after initial mail-out, telephone calls were made to those in the sample from whom we had not received a completed survey. After these calls, a third mailing of approximately 200 surveys went out.

During June of 1988, Abt staff contacted the remaining nonrespondents by telephone in order to ask a subset of key questions. At least two attempts were made to contact each nonrespondent, so that this process

would not introduce bias into the original sampling plan. The questions asked over the telephone pertained to the uses of Perkins' funds and general descriptive information.

### 1.4 Response Rate and Potential Response Bias

After the original sample was selected, we discovered that a small number of respondents should not have been included in the sampling frame. These included districts restricted to special education, schools that were part of a larger district or institution (e.g., one campus of a multi-campus community college), or districts that offered no vocational education. These cases were determined to be ineligible and deleted from our total sample of respondents. With these deletions, the secondary sample included 1106 districts and 359 AVS; the postsecondary sample was composed of 497 institutions.

Completed mail surveys were received from 714 school districts, resulting in a response rate of 64.6%. Information was obtained from another 134 districts through telephone interviews, raising the response rate to 76.7%. Mail surveys were received from 241 AVS (67.3%), with another 41 added through telephone interviews. Thus, the response rate for secondary AVS was 78.7%.

Postsecondary surveys were received from 342 institutions through the mail, resulting in a 68.8% response rate. After the telephone interviews, we had postsecondary information from 437 institutions, yielding a response rate of 87.9%.

In order to augment descriptive information available about school districts, we obtained census information about all districts in the sample. These data are utilized in the analyses presented later in this report. However, this information also offers the chance to compare the districts that responded to the secondary survey with those that did not respond, in order to explore potential response bias.

Exhibit 1.1 presents this comparison between district respondents and nonrespondents. Overall, there are few differences of great magnitude.

The average percentage of children below the federal poverty level is nearly identical among nonrespondents (13%) and respondents (14%).

**Exhibit 1.1**

**Characteristics of Survey Respondents and Nonrespondents in School Districts**

| District Characteristic | Nonrespondents | | Respondents | | t Statistic of Group Differences |
|---|---|---|---|---|---|
| | Mean | Median | Mean | Median | |
| Percentage of children below poverty level | 13.4 | 11.0 | 14.1 | 12.0 | -1.07 |
| Percentage of white students | 86.6 | 95.0 | 81.0 | 91.0 | 4.17*** |
| Percentage of black students | 7.5 | 1.0 | 8.8 | 2.0 | -1.36 |
| Percentage of Hispanic students | 4.1 | 1.0 | 7.6 | 2.0 | -5.00*** |
| Number of schools | 12.9 | 5.0 | 18.0 | 7.0 | -2.01* |
| Number of students | 7,926.9 | 2,315.0 | 11,779.8 | 3,806.0 | -1.90 |
| Number of teachers | 434.9 | 146.5 | 557.9 | 226.0 | -1.68 |
| Total n: | 265 | | 837 | | |

* $p < .05$
*** $p < .001$

Districts that did not respond to the survey tended to have a higher percentage of white students than respondents, although the difference is small in magnitude (87% versus 81%). Nonresponding districts also tended to have fewer Hispanic students, although again the differences, while statistically different, are not that large (4% versus 8%). In addition, nonresponding districts have fewer schools (13) than responding districts (18).

In addition to the differences displayed in Exhibit 1.1, the urbanicity of respondents differed from that of nonrespondents. Specifically, 60% of nonrespondents are from rural areas, while only 48% of responding districts are in rural areas. In addition, 13% of responding districts are in urban areas, compared with 7% of nonrespondents. The proportion of suburban districts is nearly equivalent among respondents (39%) and nonrespondents (34%).

Taken together, these data suggest that districts responding to the survey were more likely to be larger districts from urban areas with slightly more minority students. These also are the districts most likely to have received large Perkins' allocations. Thus, it seems likely that the districts that did not complete the questionnaire did not spend Perkins' funds, and thus did not take the time to fill out the survey.

Since it appears that districts most likely to get Perkins' funds were also most likely to fill out the questionnaire, it seems reasonable to conclude that the nonresponses do not affect our ability to describe the use of Perkins' funds. However, we may overestimate the proportion of districts receiving these federal dollars.

## 1.5 Creating National Estimates

Each of the districts, AVS and postsecondary institutions responding to the survey was assigned a sampling weight so that survey results could be weighted to reflect national estimates. These weights were based on the probability of the selection of the state from the first stage of sampling and of the district or institution from the second stage of sampling. Once the final sample of completed surveys was received, the weights were adjusted for nonresponse within states.

All of the analyses presented in this report are based on these case weights, which result in the following weighted sample sizes:

| | |
|---|---|
| School districts | 11,552 |
| Secondary AVS | 881 |
| Postsecondary institutions | 1,857 |

These weighted sample sizes yield the national estimates for all survey results.

One problem with weighted data is that such large sample sizes tend to inflate the significance levels of statistical tests. Thus, a standardized weight was created for each case by dividing the individual case weight by the average weight for the group (i.e., district, AVS, postsecondary). In this way, the average standardized weight is 1.00 and the sample sizes in statistical analyses reflect the actual sample size. All statistical tests use this standardized weight. However, in the presentation of results, the unweighted sample size and the weighted sample size associated with the national estimates are presented.

## 1.6 Summary of Results

In this section, we summarize the key findings from the secondary and postsecondary surveys.

### Description of Districts and Institutions Offering Vocational Education

- The majority of school districts (81%) nationwide offer vocational education in a single comprehensive high school; 77% of districts do not have a vocational high school within the district. When the number of vocational and comprehensive high schools are combined, the results indicate that 64% of districts have one high school and 21% have two high schools offering vocational education.

- Nationally, 61% of districts offer the option of attending an area or regional school outside of the district for vocational programs. A higher proportion of districts in suburban areas (74%) provide access to an AVS than districts in urban (59%) or rural areas (42%).

- The majority of secondary area vocational schools (86%) primarily provide vocational and related instruction; only 13% provide a full range of academic and vocational courses. In most states, area vocational schools at the secondary level are not full-time educational experiences: students attend their district comprehensive high school for academic courses and travel to the AVS for part of a day, alternative weeks or some other combination of classes.

- Forty percent of postsecondary institutions offering vocational education are designed for students to transfer to four-year colleges; nearly 50% of postsecondary institutions seek an equal balance between transfer programs and occupational education programs.

Vocational Programs Offered

- The most prevalent vocational programs offered in school districts are (a) home economics/consumer and homemaking (95% of districts) and (b) business and office education (83% of districts).

- All of the AVS surveyed offer programs in trades and industry. In addition, 91% offer programs in business and office, 82% offer programs in health and 73% provide technical training.

- Business and office and health are the two most prevalent vocational programs at postsecondary institutions, offered by approximately 90% of institutions.

Goals of Vocational Education

- In general, school districts indicated that the primary goals of secondary vocational education were to expose students to various occupational areas and to impart general skills necessary for further education or training. In contrast, secondary AVS and postsecondary institutions rated preparing students for specific occupations as the most important goal of their vocational program.

Student Enrollment Patterns

- On average, total enrollments in school districts have decreased 1.6% over the past five years. In secondary AVS and postsecondary institutions offering vocational education, total enrollments have increased approximately 6%, on average. However, while a few institutions have seen large increases in enrollments,

more than half of the AVS and postsecondary institutions have experienced a decline in overall student enrollment.

High School Graduation Requirements

- Fifty-one percent of districts have raised math requirements for graduation by one course or more between 1982-83 and 1986-87; 42% of districts increased their science requirements by one course over the past five years.

- The percentage of districts requiring vocational education courses for graduation rose from 18% in 1982-83 to 34% in 1986-87; in addition, 76% of districts count vocational courses with academic content towards high school graduation requirements.

Proportion of Districts and Institutions Spending Perkins' Funds

- A greater proportion of secondary AVS than school districts spent Perkins' funds in 1986-87. More than 80% of secondary AVS spent Perkins' funds for handicapped and disadvantaged students, as compared with approximately 50% of school districts. Half of the AVS spent Perkins' funds for program improvement, while only 26% of districts spent these federal dollars.

- At the postsecondary level, community colleges were more likely to spend Perkins' funds than postsecondary AVS, technical institutes or four-year colleges offering vocational programs. Approximately 70% of community colleges spent Perkins' handicapped, disadvantaged or program improvement funds, compared with about half of other types of postsecondary institutions.

- An equal proportion of secondary and postsecondary providers spent Perkins' funds for handicapped and disadvantaged students. As would be expected, more postsecondary institutions spent Perkins' funds for adults and single parents/homemakers. However, the proportion of postsecondary institutions spending Perkins' funds for sex equity and program improvement also is greater than the proportion of school districts and secondary AVS spending these Perkins' funds.

- Postsecondary institutions that did not spend Perkins' funds were more likely than secondary providers to indicate that they did not know about the program. In contrast, the majority of school districts that did not receive funding indicated that they did not apply because the likely awards were too small.

- School districts that did not spend Perkins' funds generally have smaller enrollments than districts spending these federal dollars.

- School districts spending Perkins' funds were more likely to be in urban areas than in rural or suburban areas. Nearly all urban districts (94%) spent handicapped and disadvantaged funds, compared with 54% of suburban and approximately 45% of rural districts. Fifty-six percent of urban districts spent Perkins' program improvement money, compared with 29% of suburban and 23% of rural districts.

- Districts spending Perkins' funds had a higher proportion of nonwhites than districts without these federal vocational funds. However, the percentage of students below the poverty level was not related to spending Perkins' funds.

Amount of Perkins' Funds Spent

- The total amount of Perkins' Title IIA and IIB funds spent by the average secondary AVS ($151,463) was significantly larger than the total expenditure by the average school district ($42,460). Half of all school districts spent less than $8,000 in total Perkins' funds during 1986-1987, while the median total expenditure at AVS was just over $91,000. However, because there are more school districts than AVS nationally, districts accounted for 71% and AVS 29% of the total Perkins' spending by secondary providers.

- At the postsecondary level, the Perkins' expenditure by community colleges averaged $155,181; at other types of postsecondary institutions, total Perkins' expenditures averaged $185,468. Total Perkins' expenditures were nearly evenly divided between community colleges and other types of postsecondary institutions, although community colleges have nearly 1.5 times more students.

- An estimated total of $645.7 million dollars in Perkins' funds was spent by districts and institutions in 1986-87. Of that amount, 62% was spent by secondary providers and 38% by postsecondary institutions.

- On average, AVS spent significantly more per student in total Perkins' dollars ($143) than either school districts ($43) or postsecondary institutions ($128). The median per student value also was higher for AVS ($87) than for postsecondary institutions ($72) or districts ($20). These figures are based on "head counts" of total student enrollment in school districts and AVS, and FTE enrollments at postsecondary institutions.

## How Districts and Institutions Spent Perkins' Funds in 1986-87

- School districts and postsecondary institutions were most likely to spend Perkins' handicapped funds on guidance, assessment or counseling; paraprofessionals or aides in the regular vocational classroom; and equipment. For example, more than half of all districts and postsecondary institutions spent a portion of their handicapped funds on guidance, assessment or counseling, averaging 24% of their handicapped expenditures.

- Secondary AVS were most likely to spend handicapped funds on direct instructional costs such as teachers or classroom aides. Sixty-two percent of AVS spent an average of 36% of Perkins' handicapped monies to pay for paraprofessionals or aides in the regular vocational classroom. Handicapped funds were used by 37% of AVS to pay teachers' salaries for separate vocational classes, averaging 19% of their Perkins' expenditures for handicapped students.

- On average across providers, a larger proportion of handicapped funds was used to support the special needs of handicapped students in regular or mainstreamed vocational classes than for separate classes.

- School districts were most likely to spend Perkins' funds for disadvantaged students on guidance, assessment or counseling; equipment; or paraprofessionals/aides in regular vocational classes. More than half of all districts spent some Perkins' disadvantaged money on guidance, assessment or counseling, averaging 22% of their total disadvantaged expenditures during 1986-87. Approximately 30% of districts spent disadvantaged funds on equipment or classroom aides, averaging about 15% of their disadvantaged expenditures.

- On average, AVS were most likely to spend disadvantaged funds on direct instruction. Sixty-one percent of AVS spent disadvantaged funds on paraprofessionals or aides for regular vocational classes, averaging 33% of their total disadvantaged expenditures in 1986-87. Approximately one third of AVS used disadvantaged funds for teachers' salaries, averaging 18% of spending, and basic skills instruction, averaging 13% of spending.

- Postsecondary institutions were most likely to use Perkins' disadvantaged funds on aides in the regular vocational classroom; basic skills instruction; and guidance, assessment or counseling services. Sixty percent of postsecondary institutions spent an average of 20% of Perkins' disadvantaged funds on guidance,

assessment and counseling. Approximately 40% of institutions spent disadvantaged funds on basic skills instruction in nonvocational classes or aides in vocational classes, each accounting for approximately 20% of their disadvantaged funds.

- In districts and AVS, Perkins' funds for limited-English-proficient (LEP) students were spent primarily on classroom aides and guidance, assessment or counseling services.

- Across the three types of providers, the most prevalent uses of Perkins' adult funds were for teachers in separate classes; guidance, assessment or counseling services; and equipment.

- Across providers, the largest proportion of Perkins' funds for single parents/homemakers (25-30%) was used for guidance, assessment or counseling services. In addition, approximately 15% of Perkins' single parent/homemaker funds paid for teachers in separate vocational classes.

- The two most prevalent uses of Perkins' funds for sex equity were to recruit students to nontraditional fields and to provide counseling and career development activities. More than half of all districts, AVS and postsecondary institutions receiving sex equity funds used these federal dollars for these activities, accounting for approximately 20% of spending.

- The majority of program improvement funds was spent on equipment in 1986-87. Approximately 80-85% of vocational providers spent a portion of their program improvement funds on equipment. School districts spent an average of 63% of program improvement funds on equipment, with half of districts spending more than 75% of their Title IIB funds in this one category. At secondary AVS, an average of 62% of program improvement funds was spent on equipment, with half of all schools spending more than 80% on equipment. Postsecondary institutions spent on average of 54% of Title IIB funds on equipment, with 60% of institutions spending all of their Title IIB money in this one category.

Supplemental Services for Handicapped and Disadvantaged Secondary Students

- Approximately half of all districts and AVS provide counseling and assessment services to all handicapped and disadvantaged students. Another 20% of respondents provided assessment and counseling services to most handicapped and disadvantaged students.

- Other types of supplemental services, such as modified curriculum or remedial basic skills instruction, were generally not offered to all handicapped and disadvantaged students.

- School districts receiving Perkins' handicapped funds were more likely to provide high-cost supplemental services such as modified facilities and equipment for handicapped students than were districts without these federal funds.

- Although the number of AVS that did not spend handicapped or disadvantaged funds was small, these institutions were less likely to provide assessment and counseling services than AVS with these funds.

- The size of the district or AVS was not related to the likelihood of providing supplemental services to a greater proportion of students.

Changes in Student Enrollments in Vocational Education 1982-83 to 1986-87

- The enrollment of handicapped students in vocational education has increased in 57% of secondary AVS, while it remained unchanged in 63% of school districts and 63% of postsecondary institutions.

- The majority of AVS (61%) and postsecondary institutions (62%) reported an increase of more than 10% in the number of disadvantaged students enrolled in vocational education. Moreover, 52% of AVS and 62% of postsecondary institutions where total student enrollments had declined reported an increase in the number of disadvantaged students enrolled in vocational education.

- Nearly 40% of AVS and 34% of postsecondary institutions reported decreases in overall vocational enrollments of more than 10%. In contrast, 40% of school districts reported no or minimum enrollment shifts.

- Postsecondary institutions with increases in vocational enrollment were most likely to attribute this upswing to increased student interest in vocational education or to increased recruitment of students.

- Postsecondary institutions with decreases in vocational enrollment were most likely to cite decreases in the number of students coming directly from high school and overall decreases in institution enrollments as factors in these declines.

- Secondary AVS and school districts were most likely to cite increased graduation requirements as factors related to declines in vocational enrollments.

- When asked about changes in specific program areas, respondents indicated that student enrollments were most likely to have decreased in agriculture; home economics/ consumer and homemaking; and trades and industry programs.

Changes in Vocational Courses 1982-83 to 1986-87

- In general, the number of vocational courses offered in school districts has remained unchanged over the last five years. In particular, more than 70% of districts reported no change in the number of courses or teaching personnel in health or in marketing and distribution programs. Approximately 58% of districts reported no change in course offerings in agriculture, home economics/consumer and homemaking, technical, or trades and industry programs.

- Courses offerings were most likely to have been expanded over the last five years in technical programs and business and office education, particularly at AVS and postsecondary institutions. Fifty-four percent of secondary AVS, 49% of postsecondary institutions and 32% of school districts reported expanding course offerings in business and office programs. In technical programs, 50% of postsecondary institutions, 35% of secondary AVS and 28% of districts expanded course offerings over the last five years.

- Courses in agriculture and trades and industry were most likely to have been reduced over the last five years, particularly at AVS and postsecondary institutions. Twenty-seven percent of secondary AVS, 31% of post-secondary institutions and 21% of school districts reported reducing course offerings in agriculture programs. In trades and industry, 23% of postsecondary institutions, 22% of secondary AVS and 26% of districts reduced course offerings over the last five years.

- Where course offerings were expanded, greater student interest was one reason for this expansion cited by a majority of respondents across program areas.

- A desire to meet increased labor market demands was cited as an important reason for expanding programs in marketing and distribution, technical training, and trades and industry by each type of vocational provider.

- Additional federal funding from the Perkins Act was cited by approximately 20-30% of respondents as related to expanding vocational course offerings in specific program areas. For example, 23% of school districts

indicated that an increase in these federal funds was an important factor in expanding technical programs. Among postsecondary institutions expanding programs, 37% cited Perkins' funds as a reason for expanding course offerings in trades and industry, 32% in home economics and 27% in business and office programs.

- Decreased student interest and declining vocational enrollments were the two reasons cited most often as related to reducing vocational course offerings.

- Responses to advances in technology was the most frequent type of change in course content reported by districts (62%), AVS (80%), and postsecondary institutions (84%).

- Remedial basic skills instruction and supplemental services for handicapped or disadvantaged students have been added or expanded over the last five years by 60-70% of AVS and postsecondary institutions. Among school districts, while 40-50% reported expanding these services, approximately 40% indicated that these services had remained unchanged over the last five years, suggesting that remedial basic skills instruction and supplemental services were already in place in many districts.

Vocational Education and the Job Training Partnership Act (JTPA)

- Only 25% of school districts received JTPA funds in 1986-87, compared with 65% of secondary AVS and 60% of postsecondary institutions.

- The majority (62%) of school districts receiving JTPA funds were awarded Title IIB monies for summer youth, as compared with only 36% of AVS and postsecondary institutions.

- A larger percentage of postsecondary institutions than secondary providers received JTPA funds for dislocated workers (Title III) and 8% coordination grants.

- On average, the total JTPA award to districts ($110,016), AVS ($95,014) and postsecondary institutions ($222,105) was not statistically different, since there was a wide range of funds received. However, the median award to postsecondary institutions ($58,528) was also higher than the median among districts ($20,000) and AVS ($44,154).

- Among providers receiving funds from both Perkins' and JTPA, the average JTPA award to districts and postsecondary institutions was three times greater than that from Perkins; the two sources of funds were nearly equivalent at AVS.

- Performance-based contracts were accepted by approximately 60% of AVS and postsecondary institutions, but only 41% of school districts. The most common reason cited by each type of provider why these funds were not accepted is that the size of the award was not worth the risk if performance standards were not met.

## 2.0 DESCRIPTION OF DISTRICTS AND INSTITUTIONS OFFERING VOCATIONAL EDUCATION

### 2.1 Introduction

The secondary and postsecondary surveys each included general descriptive questions about school districts and institutions offering vocational education. In this section, we describe five characteristics of districts and institutions: (1) school and district size; (2) mission and activities; (3) vocational programs offered; (4) primary goals of vocational education; and (5) high school graduation requirements. In later chapters, these descriptor variables will be incorporated into the analyses of the expenditures of Perkins' funds and the nature of vocational program offerings.

### 2.2 Size of Districts and Institutions

Student Enrollment

The number of students enrolled is a primary indicator of the size of an educational institution. This variable is of concern to the present study for a number of reasons. First, since the handicapped and disadvantaged funds are distributed by formula under the Perkins Act, it is important to be able to look at the amount of funds spent and the category of expenditures in relation to district or school size. For example, some smaller districts may receive minimal federal funds that preclude certain types of expenditures (e.g., purchase of vocational equipment or staff salaries). Second, the types of vocational programs and services offered may vary by size of district, with smaller districts offering a narrower range of programs. Third, increases or decreases in overall student enrollment may affect vocational programs, as districts respond to changing needs and limited resources.

On the secondary survey, we asked respondents for the total number of students enrolled in grades 9-12 during the 1986-87 and 1982-83 school years. This earlier school year was selected as a point just prior to the publication of A Nation at Risk, which precipitated widespread educational reforms. With this information, we are able to calculate changes in student enrollment over the past five years.

Survey questions focused on total student enrollments as the most reliable and readily available indicator of school size. Questions about enrollments in vocational programs and enrollment of handicapped and disadvantaged students were not included; previous efforts to collect this information at the national level resulted in great difficulty obtaining comparable data. For example, school districts vary on whether they maintain duplicated or unduplicated student counts and whether they count students taking vocational courses or only students enrolled in a vocational program (i.e., a sequenced course of study). Instead of actual counts, we asked respondents for the percentage change in handicapped, disadvantaged and vocational enrollments over the last five years (presented in Chapter 6 of this report).

In school districts, total student enrollment figures include students taking both vocational and nonvocational courses. In area vocational schools, this figure reflects the size of the vocational enterprise. For schools and districts whose high schools include only grades 10-12, an option was provided for reporting enrollment in only these three grade levels; for comparability, these figures were adjusted in the analysis to estimate enrollment in grades 9-12.

The postsecondary survey inquired about the total number of students enrolled (i.e., a "head count") during the 1986-87 and 1982-83 academic years. In addition, we asked for the total full-time equivalent (FTE) postsecondary enrollment during those two years.

Summary statistics of the student enrollment data are presented in Exhibit 2.1. The average size of school districts in 1986-87 was 939 students in grades 9 through 12, with a range from 22 to more than 158,000 students. A total of 10.5 million students were enrolled in school districts that offer vocational programs. However, half of districts nationwide have less than 365 students at the secondary level.

Secondary area vocational schools are slightly larger than districts, on average, with a mean of 1766 and median of 939 students. However, the range of school size is smaller (20 to 62,543 students) as is the total number of students attending (1.3 million). It is important to realize that these AVS enrollment figures are "head counts", that is, the total number of students attending. Since most AVS offer educational programs on a part-

Exhibit 2.1

National Estimates of Student Enrollment Figures During 1986-87 in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions Offering Vocational Education

| Level and Type of Institution | Student Enrollment 1986-87 | | | | |
|---|---|---|---|---|---|
| | Mean | Standard Deviation | Median | Range | Total |
| Secondary | | | | | |
| School districts, grades 9-12[a] | 939 | 3,547 | 364 | 22-158,563 | 10,466,384 |
| Area vocational schools, "Head count" grades 9-12[b] | 1,766 | 3,317 | 939 | 20-62,543 | 1,312,305 |
| Total | 990 | 3,538 | 388 | 20-158,563 | 11,778,689 |
| Postsecondary | | | | | |
| Community colleges | | | | | |
| FTE[c] | 4,093 | 10,011 | 1,853 | 185-93,467 | 3,709,392 |
| "Head count"[d] | 7,112 | 9,810 | 3,519 | 120-105,000 | 6,505,834 |
| Area vocational schools, four-year colleges and universities, technical institutes | | | | | |
| FTE[e] | 2,881 | 5,780 | 573 | 60-51,979 | 2,239,925 |
| "Head count"[f] | 4,042 | 5,509 | 2,000 | 131-54,630 | 3,300,227 |
| Total | | | | | |
| FTE | 3,533 | 8,348 | 1,213 | 60-93,467 | 5,949,318 |
| "Head count" | 5,664 | 8,214 | 2,950 | 120-105,000 | 9,806,062 |

[a]Weighted n=11,152; unweighted n= 802
[b]Weighted n= 743; unweighted n= 235
[c]Weighted n= 906; unweighted n= 295
[d]Weighted n= 915; unweighted n= 299
[e]Weighted n= 778; unweighted n= 104
[f]Weighted n= 817; unweighted n= 107

day or alternate week basis, these estimates are higher than full-time-equivalent (FTE) enrollments would be for these institutions.

When the enrollment figures for districts and AVS are combined, the results indicate that an estimated 11.8 million secondary students were enrolled in schools or districts offering vocational education during 1986-87. This figure is slightly lower than the 12.5 million students enrolled during that same year as reported by the National Center for Education Statistics (NCES) in The Condition of Education, 1988. We would not expect these figures to be identical for two reasons: (1) students attending district high schools for academic courses and AVS for part-time vocational programs would be double-counted in our total and (2) some districts included in the NCES counts do not offer vocational education. Nevertheless, the fact that the two figures are so close increases the validity of our national estimates.

The postsecondary enrollments in Exhibit 2.1 are separated out for community colleges and other types of vocational providers. On the post-secondary survey, respondents were asked to describe their institution. Responses indicated that 52% of postsecondary institutions offering vocational programs are community colleges. Slightly more than one third of postsecondary institutions with vocational programs are public vocational-technical institutes or area vocational schools. A small proportion (6%) of institutions are four-year colleges or universities offering associate degrees or certificates. Because of the small number in this latter category, their enrollment figures are combined with postsecondary AVS and technical institutes in Exhibit 2.1.

The average enrollment during 1986-87 in community colleges offering vocational training was 4093 FTE students and 7112 students based on a "head count." The median FTE enrollment was 1853, with a range from 185 to 93,467 students. A total of 3.7 million FTE students were enrolled in community colleges, with the total head count at 6.5 million.

Postsecondary institutions other than community colleges tend to be smaller, with an average FTE enrollment of 2881 students and an average head-count of 4042. The median FTE for these institutions was only 573 students, while the median head count was 2000 students. These smaller enrollments possibly reflect the fact that postsecondary area vocational schools,

technical institutes and colleges generally would encompass a single institution, while enrollments at community colleges often include students at multiple sites or campuses.

When all categories of postsecondary institutions are combined, the average FTE enrollment during 1986-87 was just over 3500 students. The average head count among all postsecondary institutions offering vocational programs was 5664 students. The total FTE student figures for postsecondary institutions was 5.9 million students, and the total head count 9.8 million students. This estimated total head count is close to the 9.6 million enrollment figure for public institutions of higher education during the 1986 academic year reported by NCES in The Condition of Education: Postsecondary Education.

In Exhibit 2.2, histograms of student enrollments in districts, AVS and postsecondary institutions are displayed. These categorizations of enrollment figures reveal a different distribution of enrollments in school districts as compared with secondary area vocational schools and postsecondary institutions. More than one quarter of school districts report enrolling between 100 and 300 students. These results suggest that they are generally more small than large school districts nationwide. In contrast, approximately one quarter of secondary AVS and postsecondary institutions report 1,000-2,500 students.

Unfortunately, NCES does not present enrollment figures by size category. Thus, we have no readily available comparison for these distributions.

Change in Enrollments 1982-83 to 1986-87

Changes in student enrollments are of great concern to educators. Increased enrollments have put a burden on some school districts, while decreases have necessitated closing schools or reducing programs. In order to investigate this issue vis-a-vis changes in vocational programs and course offerings, we calculated the percentage increase or decrease in student enrollments between the 1986-87 school year and the 1982-83 school year.[1]

[1]Change was calculated by: [(enrollment 1986-87) - (enrollment 1982-83)] / (enrollment 1982-83).

Exhibit 2.2

National Estimates Of Distribution Of Student Enrollment Figures
For 1986-87 In School Districts, Secondary Area Vocational
Schools And Postsecondary Institutions Offering Vocational Education

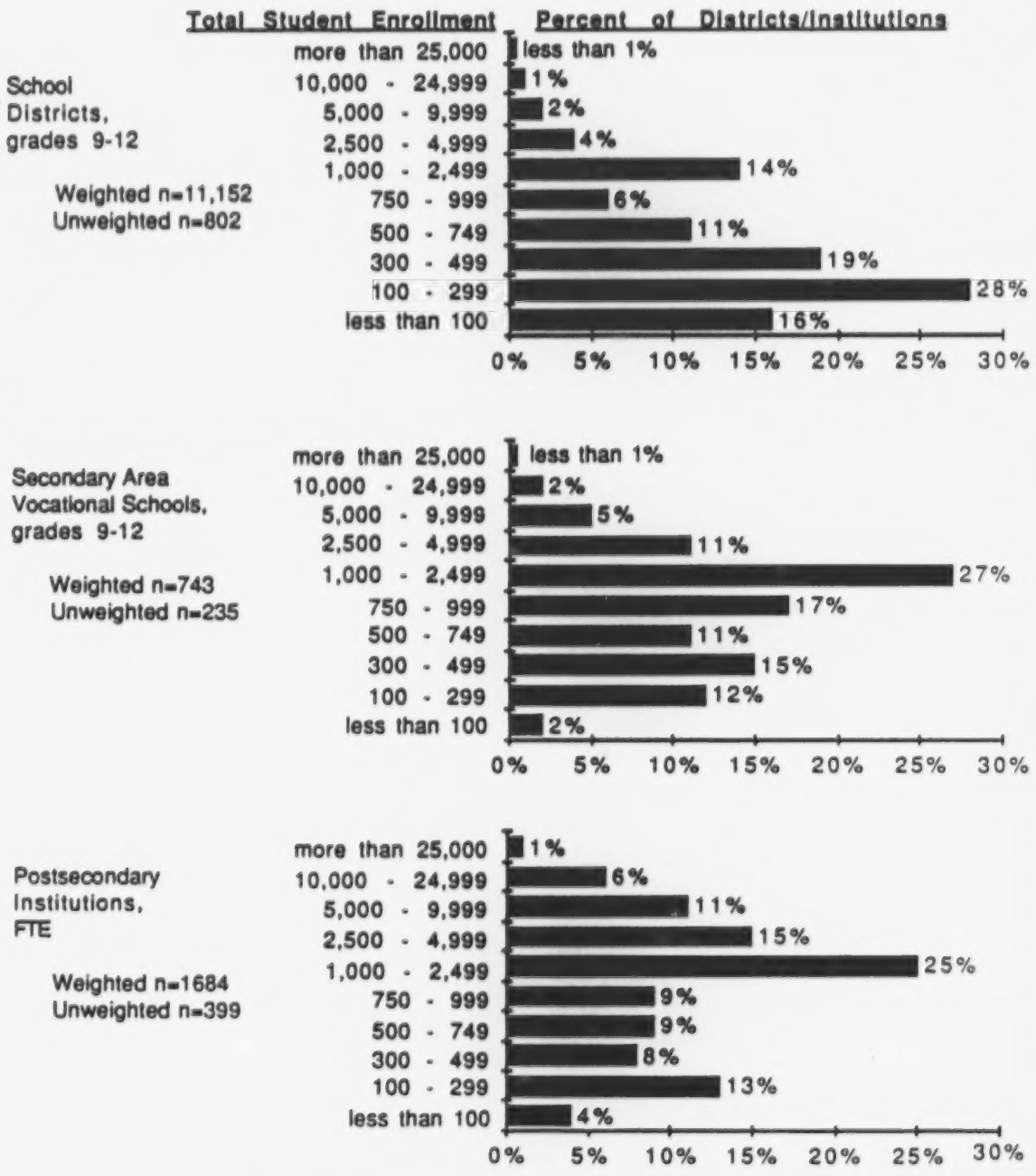


Exhibit 2.3 summarizes the national estimates of enrollment changes in school districts, secondary area vocational schools and postsecondary institutions. Since 1982-83, secondary enrollments in school districts have decreased, on average, by 1.6%. In contrast, enrollments in secondary area vocational schools have increased an average of 6.5%, while postsecondary enrollments have increased an average of 5.5%. These national estimates of mean enrollment changes in secondary area vocational schools and postsecondary institutions are each significantly different from the national estimate of mean change in enrollments in school districts, based on analysis of variance and Scheffe test for differences between group means ($p < .05$).

In the 1988 edition of The Conditions of Education, the National Center for Education Statistics (NCES) reported that public high school enrollments began a downward trend in the early 1980s that has since stabilized. The exact percentage change in secondary enrollments between 1982 and 1986 from the NCES data is -0.5%. This slight decrease in enrollments is of a similar direction and magnitude as the figure of -1.6% calculated from our survey data. However, presumably the NCES figure includes both districts and area vocational schools. The average change in enrollments across districts and AVS from our survey data is -1.0%, which is closer to the NCES figure. Of course, combining AVS and district enrollments masks the average positive shift in enrollments at AVS.

For postsecondary institutions, NCES reports that student enrollments have increased 9% since 1980. However, between 1982 and 1986, their estimates show a decrease of 2% across all postsecondary institutions. The difference between this figure and our estimated increase of 6.5% could be due to a number of factors. One, we asked respondents for retrospective enrollment information which tends to be less accurate than current information. Two, our data relates only to institutions offering vocational programs, while NCES does not separate enrollment data that way. Three, the 1986 NCES figures are estimates based on sample data, so their figures also are subject to sampling error.

Although the average change in enrollments at AVS and postsecondary institutions is positive, suggesting enrollment increases, the median values are both negative. For example, at AVS, the median of -1.4% indicates that at least half of all schools saw student enrollments decline between 1986-87 and

Exhibit 2.3

National Estimates of Changes in Student Enrollments from 1982-83 to 1986-87 in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions Offering Vocational Education

| Type of District/ Institution | Percentage Change in Enrollment[a] | | | |
|---|---|---|---|---|
| | Mean[b] | Standard Deviation | Median | Range |
| School districts, grades 9-12[c] | -1.6% | 14.6% | -3.5% | -53.8% to +62.8% |
| Secondary area vocational schools, grades 9-12[d] | +6.5% | 49.5% | -1.4% | -62.0% to 327.3% |
| Postsecondary institutions, FTE[e] | +5.5% | 39.9% | -2.3% | -69.9% to 220.0% |

[a]Calculated by: (enrollment 1986-87 - enrollment 1982-83)/(enrollment 1982-83).

[b]Analysis of variance among groups means: $F$ (2,1062) = 7.78, $p < .001$. Scheffe test of differences between groups significant ($p < .05$) for (1) school districts and area vocational schools and (2) school districts and postsecondary institutions.

[c]Weighted n=8,328; unweighted n=644
[d]Weighted n= 531; unweighted n=190
[e]Weighted n=1,205; unweighted n=290

1982-83. Similarly, at postsecondary institutions, the median value of change is -2.3%. In both settings, a few schools saw large enrollment increases, but at least half of the institutions experienced enrollment declines.

When the analyses presented in Exhibit 2.3 are run with student enrollment as a covariate, the results remain virtually the same. The adjusted means are nearly identical to the unadjusted values and enrollment is not a significant term in the equation. In each vocational setting, student enrollment is not significantly related to enrollment change; in fact, the correlation between the two variables is on the magnitude of .05. In other words, the average enrollment changes presented in Exhibit 2.3 are not a result of phenomenal growth in a few small schools.

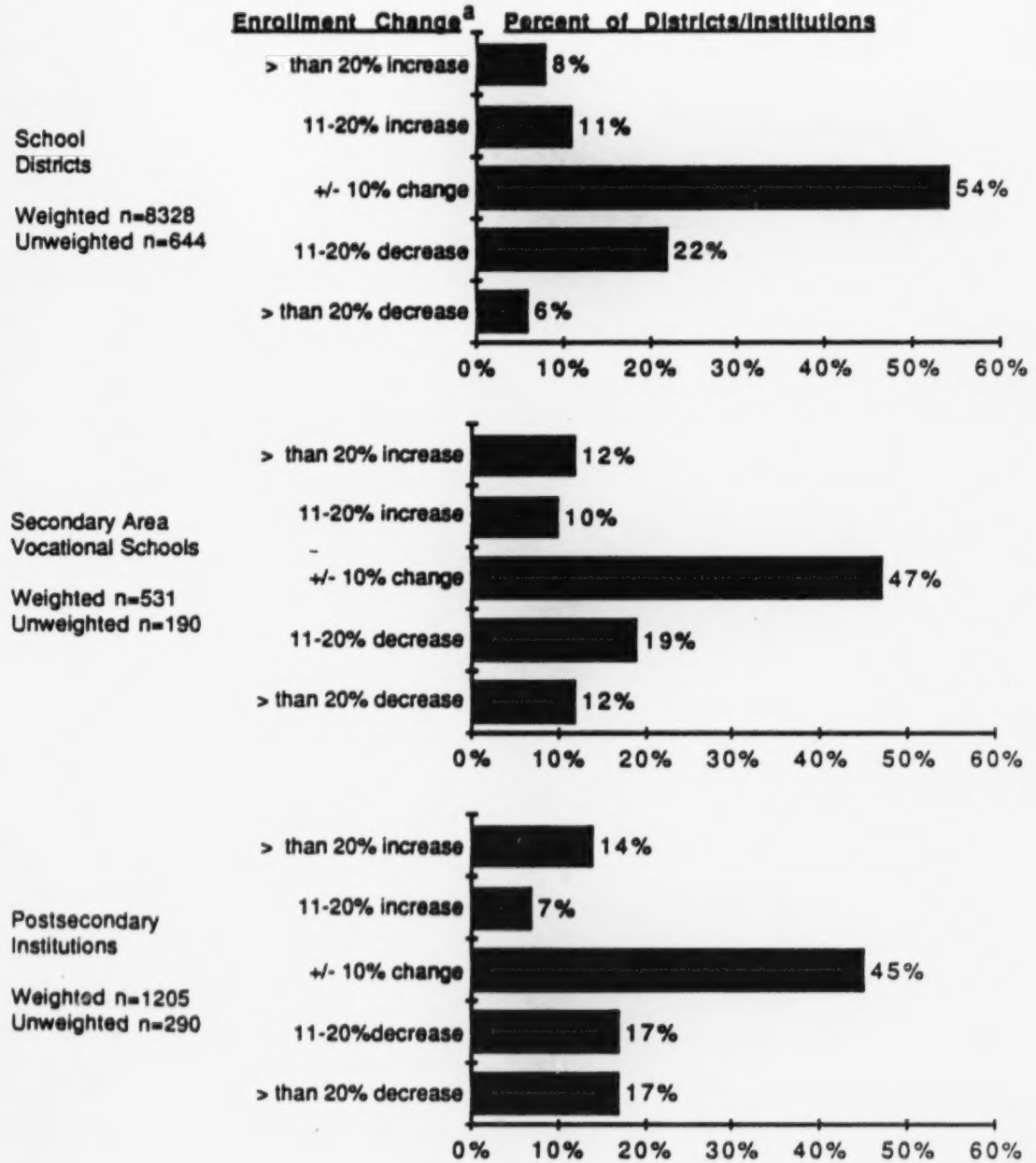
In order to move away from summary statistics, it is useful to plot the distribution of enrollment changes in each sample. As displayed in Exhibit 2.4, the majority of school districts (54%) experienced no or minimal enrollment changes. Although 22% saw moderate declines in secondary student enrollments, few school districts had increases or decreases of more than 20%. In comparison, secondary AVS and postsecondary institutions each were more likely than school districts to have experienced increases or decreases of more than 20%. Although the average change was in the positive direction, the histograms presented in Exhibit 2.4 suggest that AVS and postsecondary institutions have experienced a good deal of upward and downward enrollment shifts. Indeed, 31% of AVS and 34% of postsecondary institutions saw decreases in student enrollment of more than 10% over the last five years.

Number of High Schools Offering Vocational Programs

The number of high schools offering vocational education programs is another indicator of district size relevant to this study. School districts were asked about (1) the number of comprehensive high schools, and (2) the number of vocational high schools where vocational programs are available in the district. Comprehensive high schools are defined as schools offering academic and vocational courses to vocational and nonvocational students; a vocational high school focuses on vocational education and may or may not offer academic courses. These questions focused solely on secondary schools that are part of the district administration, and excluded area vocational schools.

Exhibit 2.4

Distribution of Changes in Student Enrollments from 1982-83 to 1986-87
In School Districts, Secondary Area Vocational Schools, and
Postsecondary Institutions Offering Vocational Education




[a] Calculated by: [(enrollment 1986-87) – (enrollment 1982-83)] / enrollment 1982-83. Difference among groups is statistically significant ($X^2$ = 47.76, 8df, p<.0001).

Exhibit 2.5 arrays the number of vocational and comprehensive high schools offering vocational programs in districts. The results reveal that 81% of districts nationwide offer vocational education in a single comprehensive high school. The majority of districts (77%) do not have vocational high schools within the district. When the number of vocational and comprehensive high schools are combined, we find that 64% of districts have one high school and 21% have two high schools offering vocational programs.

Access to Area Vocational Schools

In addition to questions about vocational programs within the district, the secondary survey asked whether the district sends any students to an area or regional vocational school. The results indicate that 61% of districts provide access to an area or regional school outside of the district for vocational programs. A total of 6.3 million students are estimated to be enrolled in districts that provide access to an area vocational school; while 3.7 million students attend districts that do not send students to an AVS (Exhibit 2.6).

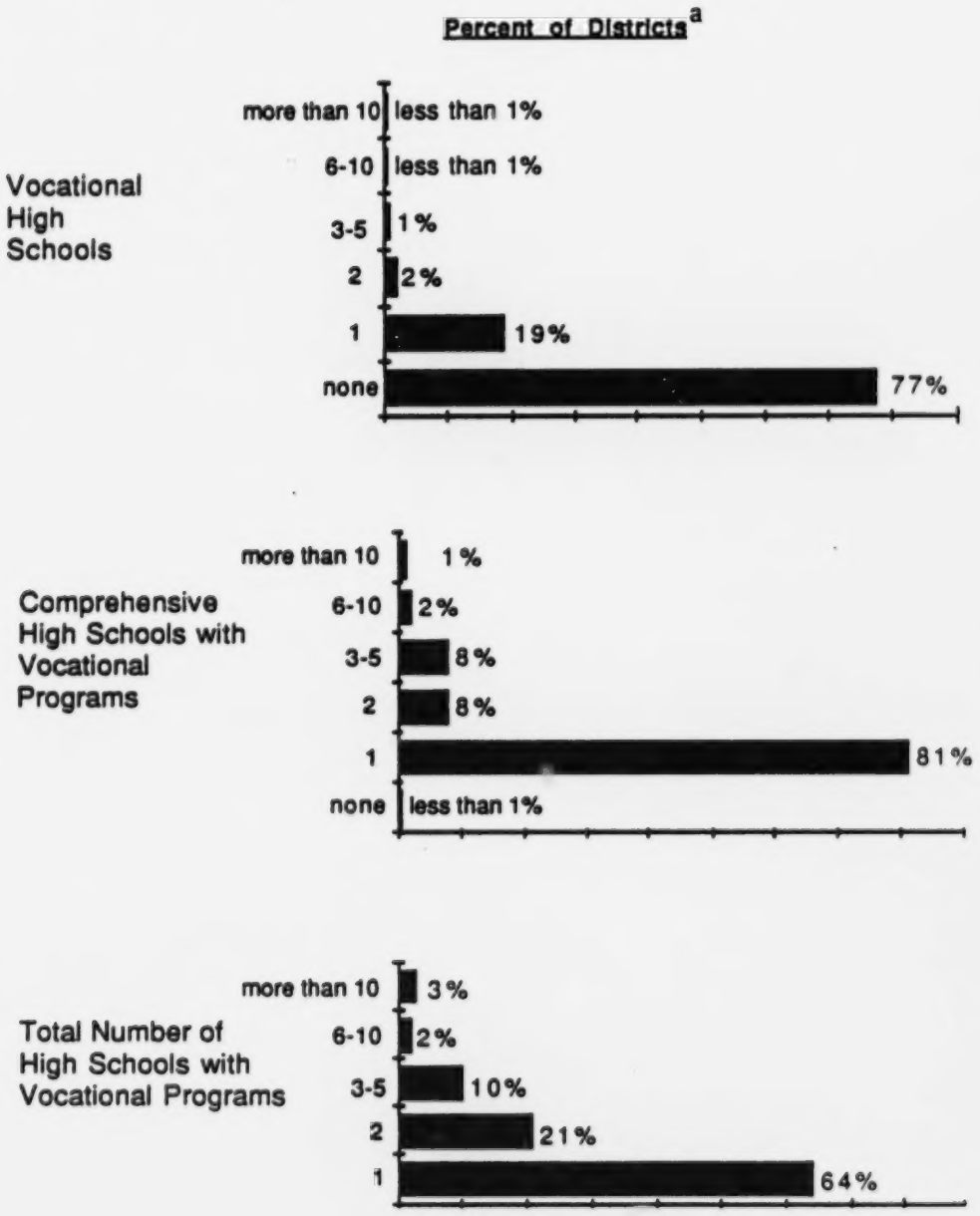
Since the existence of a regional vocational delivery system is a state-level policy, we would not expect districts that send students to an AVS to vary systematically from districts without access to an AVS. Indeed, as Exhibit 2.6 indicates, the average student enrollment among districts that send students to an AVS (931 students) is not significantly different than the average enrollment (902 students) of districts that do not offer students this option.

These results do not change when we restrict the analyses to those districts without a vocational high school. In other words, districts that have no vocational high schools and send students to area vocational schools are roughly equivalent in size to those districts without vocational high schools that do not send students to an AVS.

While district size doesn't make a difference, the urbanicity of the district is related to sending students to an area vocational school. Again, the analysis was restricted to those districts that did not report a vocational high school within the district. Districts in suburban areas are much more likely to send students to an AVS than districts in urban or suburban areas. Specifically, 74% of suburban districts send students to an AVS,

Exhibit 2.5

National Estimates of Number and Type of High Schools Offering Vocational Programs in School Districts




[a]Weighted n=8746; Unweighted n=657

Exhibit 2.6

National Estimates of Student Enrollments Classified by Whether the District Sends Students to an Area Vocational School (AVS)

| District Characteristic | Student Enrollment Grades 9-12 | | | | |
|---|---|---|---|---|---|
| | Mean[a] | Standard Deviation | Median | Range | Total |
| Sends students[b] to AVS | 931 | 3,158 | 425 | 46-158,563 | 6,282,756 |
| Does not send students to AVS[c] | 902 | 4,070 | 200 | 22-138,989 | 3,705,973 |

[a]Differences between means not statistically significant: F (1, 795) = .01, p = .91.
[b]Weighted n = 6744; unweighted n = 433
[c]Weighted n = 4108; unweighted n = 330

compared with 59% of urban districts and 42% of rural districts. These differences are statistically significant ($X^2$ = 33.41, 2df, p<.001, measure of association = .26). The results have the greatest educational significance for students in rural areas, since urban districts are more likely to have a vocational high school within the district.

Number of Faculty at Postsecondary Institutions

The postsecondary survey asked for the total number of faculty at each institution as well as the number of vocational faculty, both part-time and full-time. These results, summarized in Exhibit 2.7, indicate that half of the postsecondary institutions offering vocational programs have 50 or fewer total full-time faculty and 25 or less full-time vocational faculty. However, the range in the number of faculty per institution is rather wide, from 3 to 950 total full-time faculty and from zero to 655 full-time faculty in vocational programs. On average, institutions report 91 full-time faculty overall, and 36 full-time vocational faculty.

## 2.3 Vocational Programs and Activities

Postsecondary Institutions

Mission. Respondents were asked to describe the primary mission of their institution as: (a) primarily designed for students to transfer to four-year colleges; (b) primarily designed for students to complete occupational education programs; or (c) an equal balance between transfer programs and occupational education programs. When the results are weighted to produce national estimates, we find that few postsecondary institutions view their mission primarily as preparing students for transfer to four-year colleges. Instead, nearly 40% of postsecondary institutions offering vocational education are designed for students to complete occupational education programs. Nearly 50% seek an equal balance between transfer programs and occupational education programs.

Recruitment and Outreach Activities. The majority of postsecondary institutions (87%) indicated that they provide targeted recruitment or outreach activities for vocational education programs. Exhibit 2.8 presents the national estimates of the proportion of institutions that recruit different types of students. The most common recruitment activities focus on high

Exhibit 2.7

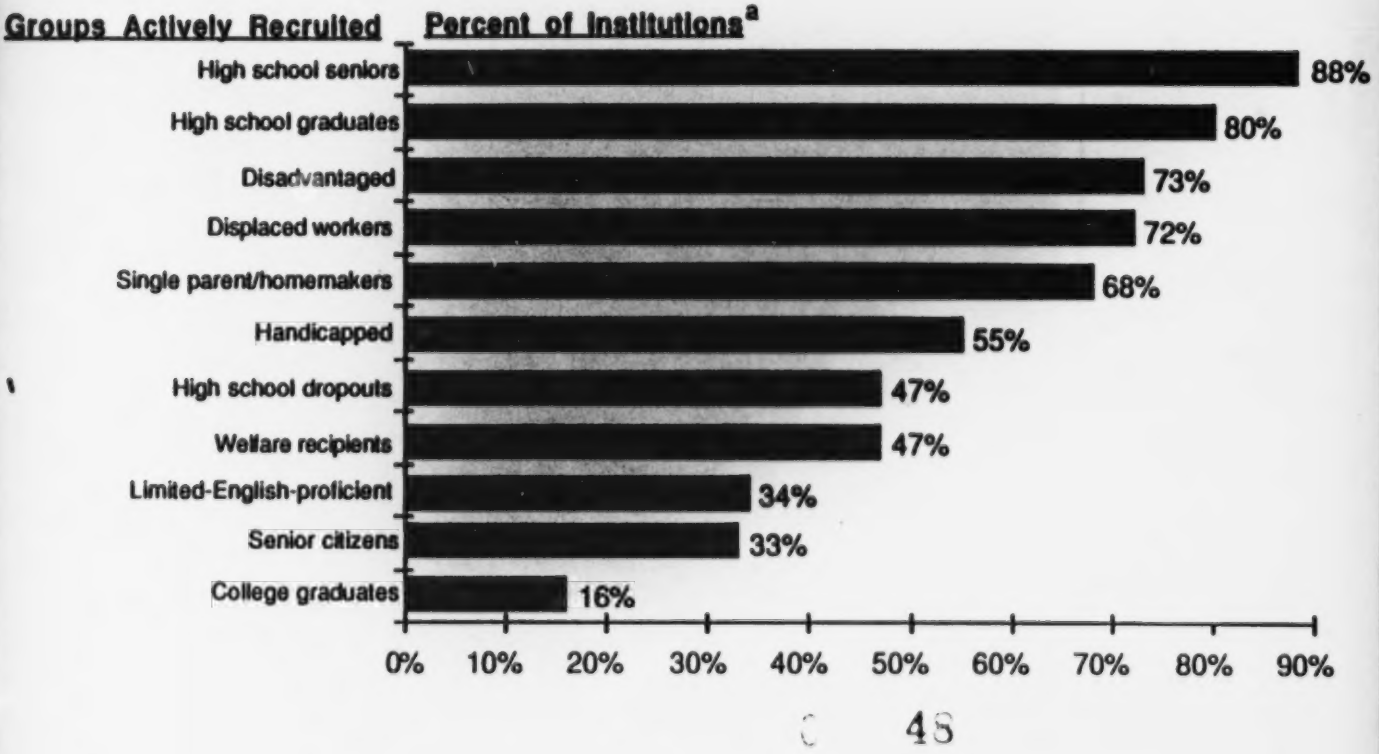
National Estimates of Total Number of Faculty and Vocational Faculty in Postsecondary Institutions During 1986-87

| Type of Faculty | Number of Faculty | | | |
|---|---|---|---|---|
| | Mean | Standard Deviation | Median | Range |
| Total at Institution[a] | | | | |
| Full-time | 91 | 109 | 46 | 3-950 |
| Part-time | 117 | 165 | 65 | 0-1873 |
| Vocational Faculty[b] | | | | |
| Full-time | 36 | 39 | 25 | 0-655 |
| Part-time | 59 | 78 | 29 | 0-500 |

[a]Weighted n=1197; unweighted n=283
[b]Weighted n=1228; unweighted n=279

Exhibit 2.8

National Estimates of Groups Actively Recruited for Vocational Programs by Postsecondary Institutions






[a] Weighted n=1236; Unweighted n=310

school seniors (88% of institutions) and high school graduates (80%). Approximately 70% of institutions recruit disadvantaged students, displaced or dislocated workers and single parents/homemakers. About half of the institutions report recruiting handicapped students, high school dropouts and welfare recipients. Senior citizens and limited-English-proficient students are recruited by approximately one third of postsecondary institutions.

Programs Run Cooperatively with Other Agencies. Nearly three quarters of postsecondary institutions run vocational programs in cooperation with other agencies. Exhibit 2.9 summarizes the national estimates of the number of students involved in various types of collaborative programs. These figures are "head counts" rather than FTE, and many programs might be quite short-term.

The most prevalent type of program involves Private Industry Councils (PICs) or others connected with the Job Training Partnership Act, with 83% of institutions reporting students involved. Across all institutions, there is an average of 121 students a year involved in programs with PICs, with a range from zero to nearly 8,000 students. However, the median is only 48 students.

More than 60% of all postsecondary institutions involve students in customized training programs with employers. On average, about 300 students a year are involved in customized training, with a range across all institutions from zero to 10,000 students. Again, the median is small, at only 41 students per year.

Approximately half of all institutions also run vocational programs in collaboration with vocational rehabilitation agencies, although the maximum number of students involved is small compared with other programs. Approximately 20-25% of postsecondary institutions run programs in conjunction with welfare agencies, state employment services, community-based organizations and other human service agencies. However, the average number of students involved per year is less than 50.

Exhibit 2.9

National Estimates of Students Involved in Vocational Programs Run by Postsecondary Institutions in Cooperation with Other Agencies During 1986-87

| Type of Agency | Number of Students | | | | Percent of Institutions with Students Participating[a] |
|---|---|---|---|---|---|
| | Mean | Standard Deviation | Median | Range | |
| Private Industry Council | 121 | 444 | 48 | 0-7875 | 83% |
| Employees (customized training) | 301 | 767 | 41 | 0-10,000 | 63% |
| Vocational rehabilitation | 29 | 74 | 2 | 0-466 | 51% |
| School districts | 45 | 121 | 0 | 0-1750 | 34% |
| Welfare agency | 29 | 100 | 0 | 0-760 | 27% |
| State employment services | 13 | 55 | 0 | 0-529 | 24% |
| Community-based organization | 43 | 392 | 0 | 0-6000 | 21% |
| Other human service agency | 33 | 241 | 0 | 0-6000 | 19% |
| Unions | 32 | 145 | 0 | 0-1500 | 16% |
| Economic development or commerce agencies | 19 | 77 | 0 | 0-928 | 15% |
| Public housing authority | 3 | 30 | 0 | 0-825 | 9% |
| Other employment services | 3 | 20 | 0 | 0-180 | 2% |

[a]Weighted n=910; unweighted n=237

Area Vocational Schools

Secondary area vocational schools (AVS) were asked about the mix of academic and vocational course offerings. (This question was not asked of school districts.) The weighted results indicate that most area vocational schools (86%) primarily provide vocational and related instruction. Only a small portion of AVS (13%) provide a full range of academic and vocational courses. These findings, along with anecdotal evidence from conversations with survey respondents, suggest that in most states, area vocational schools at the secondary level are not full-time educational experiences. Students attend their district comprehensive high school for academic courses and travel to the AVS for part of a day, alternative weeks or some other combination of classes.

The indication that most secondary AVS are not full-day programs will be important to keep in mind in later sections of this report when the use of Perkins' funds and the delivery of supplemental services are explored. Programs that are not full-day may be less likely to provide the full range of educational and support services. Indeed, several survey respondents from part-day area vocational schools expressed concern that the survey results might underestimate the types of activities and services available to students who divide their time between comprehensive high schools and AVS.

## 2.4 Vocational Programs Offered

Respondents to the secondary and postsecondary surveys were asked to describe the changes in vocational course offerings over the past five years in seven program areas: agriculture; business and office; distribution and marketing; health; occupational home economics/consumer and homemaking; technical; and trades and industry. Response options included:

- program expanded;
- program reduced;
- no change;
- program not offered in last five years.

By combining the first three categories, we can learn about the prevalence of different types of vocational programs offered at secondary and postsecondary institutions. This information is presented in Exhibit 2.10; information about changes in course offerings is presented in Chapter 7 of this report.

School Districts

The most prevalent vocational programs offered in school districts are (a) home economics/consumer and homemaking (95% of districts) and (b) business and office (83% of districts). A majority also offer programs in agriculture (66%) as well as trades and industry (60%). Approximately 40% of districts offer programs in health; distribution and marketing; and technical training.

Secondary AVS

All of the AVS surveyed offer programs in trades and industry. In addition, 91% offer programs in business and office, 82% offer programs in health and 73% provide technical training. Slightly fewer AVS offer programs in agriculture (60%); distribution and marketing (67%); or home economics/consumer and homemaking (66%).

Postsecondary Institutions

Business and office education as well as health programs are offered by approximately 90% of postsecondary institutions with vocational programs. In addition, 85% provide technical training; 79% have programs in trades and industry; and 67% offer programs in distribution and marketing. Fewer postsecondary institutions offer programs in agriculture (45%) or home economics/consumer and homemaking (42%).

Differences Among Districts and Institutions

Courses in home economics, including consumer and homemaking as well as occupational home economics, are more likely to be offered in school districts (95%) rather than AVS (66%) or postsecondary institutions (42%). In contrast, programs in health are offered in a greater proportion of AVS (82%) and postsecondary institutions (89%) than school districts (40%). Similarly, technical programs are more likely in AVS (73%) or postsecondary institutions

Exhibit 2.10

National Estimates of Vocational Course Offerings in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions

| Program Area | Percent Offering Program | | | $X^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | Districts[a] | AVS[b] | Postsecondary[c] | |
| Agriculture | 66.2 | 60.2 | 44.6 | 34.10*** (.19) |
| Business and office | 83.4 | 90.8 | 90.4 | 10.61** (.11) |
| Distribution and marketing | 39.6 | 66.7 | 66.9 | 68.91*** (.27) |
| Health | 39.9 | 81.5 | 89.4 | 217.40*** (.48) |
| Home economics[d] | 95.0 | 66.2 | 42.1 | 253.38*** (.52) |
| Technical | 38.4 | 73.0 | 85.2 | 175.74*** (.44) |
| Trades and industry | 59.7 | 100.0 | 79.0 | 116.71*** (.36) |

[a]Weighted n = 6196; unweighted n = 563
[b]Weighted n = 581; unweighted n = 206
[c]Weighted n = 1208; unweighted n - 296
[d]Includes consumer and homemaking as well as occupational home economics

** p <.01
***p <.001

(85%) than in districts (38%). Each of these differences is statistically significant ($p < .001$), with a strong correlation (measure of association) between type of provider and program offering.

Vocational programs in agriculture are more frequently offered at the secondary level than the postsecondary level. More than 60% of districts and AVS report programs in agriculture, as compared with 45% of postsecondary institutions. This is the only case where secondary AVS and districts look similar. In other program areas, AVS are more likely to offer programs in comparable prevalence to postsecondary institutions.

## 2.5 Goals of Vocational Education

The Perkins Act, in amending and clarifying the federal vocational education policy, had two primary objectives: (1) to assure access to quality vocational education programs for individuals who are inadequately served by vocational education, and (2) to expand, improve and modernize vocational education programs in the United States. To address the first objective, the federal legislation stipulated that 57% of the Basic State Grants must be allocated to vocational programs for special population groups, including handicapped, disadvantaged, and limited-English-proficient students. To meet the second goal, the law directed that the remainder of the Basic State Grants fund the Vocational Education Improvement, Innovation and Expansion Program to develop or expand high quality programs that will prepare American students for an increasingly technological work force.

To look at the extent to which the goals of local education agencies (LEAs) match federal goals and to investigate the relationship between local goals and vocational programs, survey respondents were asked to rate the top three goals for vocational education in their district or institution. The goals listed on the secondary survey included:

- promote access to vocational education for disadvantaged and handicapped students;
- prepare students for specific occupations;
- impart general employability skills;
- enhance students' awareness of various occupational areas;

- prepare students for further education or training;
- ensure that students master basic skills;
- prevent students from dropping out of school; and
- stimulate economic development.

The postsecondary survey listed seven of the same goals for vocational education as the secondary survey. However, the goal of preventing students from dropping out of school was not included on the postsecondary survey because it was considered to be less relevant at this education level. In addition, two goals were added:

- prepare students to transfer to further education in four-year institutions; and
- meet the needs of specific employers or unions (e.g., customized training).

Exhibit 2.11 presents the national estimates of vocational education goals rated by school districts, secondary AVS and postsecondary institutions. In addition to percentages, Exhibit 2.11 shows (1) the chi-square test statistic of differences among the three samples, and (2) the measure of association for each comparison, an indication of the strength of the relationship similar to a correlation coefficient. We begin by describing the primary goals of each type of vocational provider, followed by a discussion of differences among them.

School Districts

Imparting general employability skills and preparing students for further education are the two goals of vocational education most often rated first by school districts. Approximately 27% of districts rated each of these goals as primary, with between 41% and 44% rating each either as a second or third goal of vocational education in the district. Thus, approximately 70% of districts viewed these goals as among the top three objectives of their secondary vocational program.

Nearly half of all districts indicated that enhancing students' awareness of various occupational areas was one of the top three goals of their vocational program. This goal was rated first by 19% of districts, while 29% rated it as the second or third goal.

Exhibit 2.11

National Estimates of Goals of Vocational Education in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions

| Goal of Vocational Education | Rated as Primary Goal | | | Rated as Second or Third Goal | | | Not One of Top Three Goals | | | $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|---|---|---|
| | % Districts[a] | % AVS[b] | % Postsec.[c] | % Districts | % AVS | % Postsec. | % Districts | % AVS | % Postsec. | |
| Access for disadvantaged and handicapped | 4.7 | 0 | 2.3 | 18.8 | 31.0 | 22.7 | 76.5 | 69.0 | 75.0 | 23.53** (.10) |
| Prepare for specific occupations | 12.9 | 69.4 | 72.0 | 26.3 | 15.3 | 19.8 | 60.8 | 15.3 | 8.2 | 444.03*** (.44) |
| Impart general employability skills | 27.7 | 12.6 | 9.3 | 41.4 | 39.8 | 34.3 | 30.9 | 47.6 | 56.3 | 82.15*** (.19) |
| Enhance awareness of various occupational areas | 19.1 | 3.3 | 3.7 | 29.3 | 16.6 | 3.7 | 51.5 | 80.1 | 91.8 | 182.50*** (.28) |
| Prepare students for further education | 26.7 | 5.6 | 0.5 | 44.3 | 50.3 | 15.0 | 29.0 | 44.1 | 84.5 | 312.77*** (.37) |
| Prepare students for transfer to other training | n/a | n/a | 1.4 | n/a | n/a | 7.1 | n/a | n/a | 91.5 | n/a |
| Ensure that students master basic skills | 6.5 | 8.6 | 4.4 | 21.6 | 21.5 | 29.9 | 71.9 | 69.9 | 65.7 | 11.67* (.07) |
| Stimulate economic development | 0.2 | 0 | 1.7 | 1.0 | 13.0 | 21.7 | 98.9 | 87.0 | 76.5 | 127.75*** (.24) |
| Prevent students from dropping out of school | 1.4 | 0 | n/a | 15.2 | 10.6 | n/a | 83.4 | 89.4 | n/a | 5.73 (.08) |
| Meet the needs of specific employers | n/a | n/a | 0.1 | n/a | n/a | 30.3 | n/a | n/a | 69.7 | n/a |

[a]Weighted n = 8453; unweighted n = 671
[b]Weighted n = 634; unweighted n=222
[c]Weighted n = 1396; unweighted n=335
* $p < .05$
** $p < .01$

Approximately 40% of districts viewed preparing students for specific occupations as among their top three goals. However, only 13% rated this specific training as their first priority. This goal was not related to having a vocational high school within the district, since 28% of districts with vocational high schools and 25% of districts without a vocational high school rated it as a goal for the district.

Promoting access to vocational education for handicapped and disadvantaged students was rated as a primary goal by only 5% of districts. Another 19% rated it as the second or third goal of their vocational program.

Less than 7% of districts rated ensuring that students master basic skills as a primary goal of vocational education, while 22% rated it as second or third. Similarly, few districts indicated that preventing students from dropping out of school was a goal of their vocational program, with 1% rating it first and 15% rating it second or third. Less than 2% of districts indicated that stimulating economic development was one of the top three objectives for vocational education.

Secondary Area Vocational Schools

Preparing students for specific occupations was rated as the primary goal of vocational education by 69% of area vocational schools. Another 15% indicated that is was the second or third goal of their institution.

More than half of the secondary AVS indicated that imparting general employability skills and preparing students for further training were goals of their institutions. However, they were more likely to rate each of these goals as second or third than first. For example, 6% of AVS rated preparing students for further education first, while 50% rated it second or third.

Among AVS, 30% of the respondents indicated that ensuring students master basic skills was one of the top three goals of the institution, with 9% rating it as the most important goal. This goal is related to the types of courses offered at the AVS. Of the small proportion of AVS offering a full range of academic courses, 68% rated basic skills as one of their top three goals. In contrast, only 27% of AVS that primarily provide vocational-related

instruction view basic skills as one of their top goals. This is a statistically significant relationship ($X^2$ = 13.79, 3df, p=.003).[2]

Fewer than 20% of AVS indicated that enhancing students' awareness of various occupational areas was one of the top three goals of their institution.

None of the AVS surveyed viewed access to vocational education for disadvantaged and handicapped students as a primary goal. However, 31% rated this access as a second or third goal of the institution.

Approximately 10% of AVS rated economic development and preventing students from dropping out of school as the second or third goal of the institution. None of the AVS rated either of these goals as primary.

Postsecondary Institutions

A clear majority (72%) of postsecondary institutions indicated that preparing students for specific occupations was the primary goal of their vocational program. No other goal was rated first by more than 10% of postsecondary institutions.

Approximately one third of postsecondary institutions indicated that emparting general employability skills was the second or third most important goal of their institution. Only 9% rated this as most important. Similarly, 30% of institutions rated ensuring students master basic skills as second or third, with only 9% rating it number one.

Less than 3% of postsecondary institutions felt that access to vocational education for handicapped and disadvantaged students, economic development or meeting the needs of specific employees was a prime goal. However, 22-30% rated each of these activities as a second or third goal of vocational education in their institution.

In general, postsecondary institutions do not view preparing students for further education or training as an important objective. Only 10-15% of institutions rated either of these goals as among the top three. Similarly, less than 8% of institutions indicated that enhancing students'

[2]This is the only statistically significant relationship between goals and the mix of academic and vocational courses at AVS.

awareness of various occupational areas was a top goal of their vocational program.

Differences and Similarities Among Goals

In examining the goals of districts, secondary AVS and postsecondary institutions, several findings stand out. First are the differences between the goals of school districts and those of AVS and postsecondary institutions. Looking across all goals, a pattern emerges that suggests school districts view the primary goal of secondary vocational education to be exposing students to various occupational areas and imparting general skills necessary for employment or further training. For example, approximately 20-30% of school districts rate each of the following three goals as their top priority: imparting general employability skills, enhancing awareness of various occupational areas, and preparing students for further education. In contrast, the majority of postsecondary institutions do not rate any of these goals as among their top three. Among AVS, 80% do not consider enhancing awareness of various occupational areas as a top goal, although 40-50% rate employability skills and preparation for further training as a second or third goal of their vocational programs.

Rather than providing general skills and awareness, the survey results suggest that secondary AVS and postsecondary institutions view preparing students for specific occupations as the most important goal of their vocational program. Approximately 70% of both AVS and postsecondary institutions rate this as their first goal, with 15-20% rating it as a second or third goal. In contrast, only 13% of school districts rated it as number one.

The second conclusion to be drawn from the ratings of vocational goals is that all three types of providers view their mission to be directly tied to vocational training or occupational preparedness, rather than to providing alternative high school programs or teaching basic skills. For example, only 10-15% of school districts and secondary AVS considered preventing students from dropping out of school as one of their top three goals. Although educators sometimes view vocational programs as a way to engage disenfranchised students and keep them in school, it does not appear that vocational educators see this as a primary goal.

The third finding of note is the difference between federal and local goals for vocational education. For example, the large majority of school districts, secondary AVS and postsecondary institutions do not consider providing access to vocational education for disadvantaged and handicapped students as one of the primary goals of vocational education. Although the federal dollars these LEAs receive are weighted towards serving these special populations, less than 5% of school districts and postsecondary institutions and none of the AVS rated this as their most important goal. However, nearly one third of AVS rated access for handicapped and disadvantaged as their second or third most important goal.

In addition, although in the preface to the Perkins Act Congress expressed concern about U.S. productivity and preparation of the labor force, few respondents consider economic development as a primary goal of vocational education. Here there is a significant difference between postsecondary institutions and secondary LEAs. Virtually none of the school districts and approximately 10% of secondary AVS rated economic development as one of the top three goals for vocational education. In comparison, nearly one quarter of postsecondary institutions indicated that economic development was one of the goals of their vocational program.

## 2.6 High School Graduation Requirements

More stringent graduation requirements are one of the more visible results of the education reform movement. Vocational educators have been concerned that increases in the number of core courses required for graduation limits the number of vocational courses that students have time to take. In order to look at the relationship between graduation requirements and vocational education, we asked respondents to the secondary survey about the number of Carnegie units or one-year courses required for graduation in the 1982-83 school year and the 1986-87 school year.

In this section we present the number of credits that districts require in the four core courses: English, math, science and social studies. In addition, we report: (a) the changes in these graduation requirements over the five years from 1982-83 to 1986-87; (b) the number of credits in vocational education required for graduation; and (c) whether vocational courses with academic content count toward graduation require-

ments. Each of these analyses is restricted to school districts and exclude secondary area vocational schools. Since most area vocational schools provide primarily vocational instruction, most do not set graduation requirements; students must meet the requirements of their sending district.

Core Course Requirements

Exhibit 2.12 presents the distribution of graduation requirements for English, math, science and social studies in school districts during 1982-83 and 1986-87.

In 1982-83, 77% of districts required four or more years of English for high school graduation. By 1986-87, this percentage increased to 88%, and no districts required fewer than two English courses.

In math and science, there has been a shift away from requiring a single course for graduation toward requiring two or three courses. For example, 34% of districts nationally required 1-1.5 math courses in 1982-83, 58% required 2-2.5 and only 6% required 3-3.5. By 1986-87, only 3% required just one course, 68% required 2-2.5 and 23% required 3-3.5 courses. Similarly, while 44% of districts required 1-1.5 science courses for graduation in 1982-83 and 50% required 2-2.5 courses, 72% of districts required 2-2.5 courses in 1986-87 and only 11% required just one science course. In addition, 6% of districts required students to take a combined total of five math and science courses, either by taking three math and two science or vice versa.

In social studies, a greater proportion of districts required 3-3.5 courses for graduation in 1986-87 than was the case five years earlier. In 1982-83, 55% of districts required 2-2.5 courses and 29% required 3-3.5; by 1986-87, 39% required 2-2.5 courses and 48% required 3-3.5 courses for graduation.

These district-level graduation requirements estimated from the survey data are similar to or slightly more stringent than the state-mandated graduation requirements as of April 1987 reported by the Education Commission of the States (ECS) in their Clearinghouse Notes. Based on our survey data, we estimate that 88% of districts required four or more years of English in 1986-87, while the ECS survey of the fifty states and the District of Columbia

Exhibit 2.12

National Estimates of Core Course Requirements
in School Districts During 1982-83 and 1986-87

| Subject Area | Number of Courses Required | Percent of Districts[a] 1982-83 | 1986-87 |
|---|---|---|---|
| English | None | 0.1 | 0.0 |
| | 0.5 | 0.0 | 0.0 |
| | 1-1.5 | 0.01 | 0.0 |
| | 2-2.5 | 1.0 | 0.3 |
| | 3-3.5 | 22.3 | 11.5 |
| | 4.0 | 76.6 | 87.6 |
| | 4+ | 0.4 | 0.6 |
| Math | None | 0.5 | 0.1 |
| | 0.5 | 0.2 | 0.04 |
| | 1-1.5 | 33.9 | 2.9 |
| | 2-2.5 | 58.1 | 67.5 |
| | 3-3.5 | 5.8 | 22.6 |
| | 4.0 | 1.2 | 1.4 |
| | Math-Science comb.[b] | 0.3 | 5.6 |
| Science | None | 0.6 | 0.1 |
| | 0.5 | 0.2 | 0.03 |
| | 1-1.5 | 44.1 | 11.4 |
| | 2-2.5 | 50.3 | 72.3 |
| | 3-3.5 | 4.4 | 10.1 |
| | 4.0 | 0.0 | 0.2 |
| | Math-Science comb.[b] | 0.3 | 5.8 |
| Social studies | None | 0.04 | 0.0 |
| | 0.5 | 0.01 | 0.0 |
| | 1-1.5 | 12.6 | 3.9 |
| | 2-2.5 | 54.9 | 39.0 |
| | 3-3.5 | 29.4 | 47.8 |
| | 4.0 | 3.1 | 8.8 |
| | 4+ | 0.0 | 0.1 |

[a]Weighted n = 8078; unweighted n = 718
[b]Requirement for a combined total of math and science courses. Most often, students have option to take 2 or 3 math and 2 or 3 science for a total of 5.

indicated that 75% of the states mandated four years of English. Similarly, ECS report that 20% of the states required at least three years of math and 6% required at least three years of science, compared with our estimates of 24% and 10% respectively. For social studies, our survey data indicate that an estimated 57% of districts required at least three years of social studies, compared with 51% of the states in the ECS report. Since districts have the option to set more stringent requirements than states mandate, the national estimates of the graduation requirements in 1986-87 from the vocational survey seem quite in line with state-level requirements reported by ECS.

Changes in Core Course Requirements

Exhibit 2.13 displays the magnitude of change in core course requirements, calculated as the difference between a district's 1986-87 and 1982-83 graduation requirements. Districts that allow a combination of math and science credits and those reporting data for only one of the two years were excluded from this analysis.

Since the majority of districts required four years of English in 1982-83, this subject area saw the least amount of change, with 87% of districts instituting no change and 11% increasing requirements by one course. In contrast, graduation requirements in math rose an average of one-half course across all districts, and 51% of districts raised their math requirements by one course or more.

There were moderate changes in graduation requirements in science and social studies. Approximately 40% of districts increased their science requirements for graduation by one or more courses; 31% of districts raised social studies requirements by one or more courses.

Vocational Requirements for Graduation

A small proportion of districts require vocational courses for high school graduation. In 1982-83, 82% of districts had no such requirement, and 14% required only one vocational course. The remaining 4% of districts required from two to six vocational courses.

The percentage of districts requiring any vocational courses rose from 18% in 1982-83 to 34% in 1986-87. Approximately 24% of districts

**Exhibit 2.13**

**National Estimates of Changes in District Graduation Requirements from 1982-83 to 1986-87**

| Subject Area | Change in Number of Courses Required | | Percent of Districts[a] | Average Change |
|---|---|---|---|---|
| English | Decrease ≤ 1 | | 0.1 | 0.13 |
| | No change | | 86.6 | |
| | Increase: | 0.5 | 2.1 | |
| | | 1-1.5 | 11.0 | |
| | | 2-2.5 | 0.2 | |
| | | 3+ | 0.1 | |
| Math | Decrease ≤ 1 | | 2.4 | 0.51 |
| | No change | | 45.8 | |
| | Increase: | 0.5 | 1.4 | |
| | | 1-1.5 | 48.3 | |
| | | 2-2.5 | 1.8 | |
| | | 3+ | 0.4 | |
| Science | Decrease ≤ 1 | | 2.3 | 0.42 |
| | No change | | 55.5 | |
| | Increase: | 0.5 | 0.8 | |
| | | 1-1.5 | 39.5 | |
| | | 2-2.5 | 2.0 | |
| | | 3+ | 0.0 | |
| Social studies | Decrease: | ≤ 1 | 1.3 | 0.37 |
| | No change | | 59.9 | |
| | Increase: | 0.5 | 8.3 | |
| | | 1-1.5 | 27.2 | |
| | | 2-2.5 | 3.2 | |
| | | 3+ | 0.1 | |

[a]Weighted n = 7611; unweighted n = 574

required one vocational course for graduation in 1986-87, and 10% required from two to six vocational courses.

While most districts do not have a vocational education requirement per se, the majority of districts count vocational courses with academic content as core courses towards graduation. Based on the survey responses, we estimate that 76% of all districts nationally have this option.

## 2.7 Summary and Conclusions

In this section, we highlight the major findings about the nature and focus of vocational education in districts, secondary AVS and postsecondary institutions. In addition, we summarize the descriptive information about two key issues in vocational education: student enrollment patterns and changes in high school graduation requirements between 1982-83 and 1986-87.

- **The majority of school districts (81%) nationwide offer vocational education in a single comprehensive high school; 77% of districts do not have a vocational high school within the district.**

Comprehensive high schools are defined as schools offering academic and vocational courses to vocational and nonvocational students. A vocational high school focuses on vocational education and may or may not teach academic courses. When the number of vocational and comprehensive high schools are combined, the results indicate that 64% of districts have one high school and 21% have two high schools offering vocational education.

- **Nationally, 61% of districts send students to an area or regional school outside of the district for vocational programs. A higher proportion of districts in suburban areas send students to AVS than districts in urban or rural areas.**

While 74% of districts in suburban areas send students to an AVS, only 59% of urban districts and 42% of rural districts report that this option is available for students. This analysis focused solely on districts that do not have a vocational high school within the district. Since urban districts are more likely to have a vocational high school within the district, these results suggest that students in rural districts are less likely to have access to either a vocational high school or an area vocational school at the secondary level.

- **The majority of secondary area vocational schools (86%) primarily provide vocational and related instruction; only 13% provide a full range of academic and vocational courses.**

These findings, along with anecdotal evidence from conversations with survey respondents, suggest that in most states, area vocational schools at the secondary level are not full-time educational experiences. Students attend their district comprehensive high school for academic courses and travel to the AVS for part of a day, alternative weeks or some other combination of classes.

- **Forty percent of postsecondary institutions offering vocational education are designed for students to transfer to four-year colleges; nearly 50% of postsecondary institutions seek an equal balance between transfer programs and occupational education programs.**

- **Nearly three quarters of postsecondary institutions run vocational programs in cooperation with other agencies. These collaborations tend to involve Private Industry Councils (PIC) or others connected with the Job Training Partnership Act (JTPA), or employers for customized training.**

Eighty-three percent of postsecondary institutions reported collaborative programs with PICs. However, across institutions, there was an average of 121 students a year involved in these programs, with a median of only 48 students. Similarly, while more than 60% of institutions involve students in customized training programs, about 300 students a year are involved, on average, with a median of 41 students. Thus, these collaborative programs tend to be small.

- **The most prevalent vocational programs offered in school districts are (a) home economics/consumer and homemaking and (b) business and office education.**

More than 80% of districts offer business and office, while 95% offer home economics/consumer and homemaking education. A majority of districts also offer programs in agriculture (66%) and trades and industry (60%). Approximately 40% of districts offer programs in health; distribution and marketing; or technical training.

- **All of the AVS surveyed offer programs in trades and industry. In addition, 91% offer programs in business and office, 82% offer programs in health and 73% provide technical training.**

Fewer AVS offer programs in agriculture (60%); distribution and marketing (67%); or home economics/consumer and homemaking (66%).

- **Business and office and health are the two most prevalent vocational programs at postsecondary institutions, offered by approximately 90% of institutions.**

In addition, 85% of institutions offer technical programs; 79% have programs in trades and industry; and 67% offer distributive and marketing education. Fewer postsecondary institutions offer programs in agriculture (45%) or home economics/consumer and homemaking (42%).

- **In general, school districts indicated that the primary goals of secondary vocational education were to expose students to various occupational areas and to impart general skills necessary for further education or training. In contrast, secondary AVS and postsecondary institutions rated preparing students for specific occupations as the most important goal of their vocational program.**

Approximately 27% of school districts indicated that imparting general employability skills was the primary goal of vocational education, with another 41% rating this as a second or third goal. Similarly, 27% of districts rated preparing students for further education as first, and 44% rated it as the second or third goal of their vocational program.

In contrast, preparing students for specific occupations was rated as the primary goal of vocational education by 69% of AVS and 72% of postsecondary institutions.

- **On average, total enrollments in school districts have decreased 1.6% over the past five years. In secondary AVS and postsecondary institutions offering vocational education, enrollments have increased approximately 6%, on average. However, while a few institutions have seen large increases in enrollments, more than half of the AVS and postsecondary institutions have experienced a decline in overall student enrollment.**

The majority of school districts (54%) experienced enrollment changes of less than 10%, as compared with 47% of secondary AVS and 45% of postsecondary institutions. Instead, 31% of AVS and 34% of postsecondary institutions reported decreases of more than 10% in overall students enrollments over the last five years. For school districts and postsecondary

institutions, these enrollment patterns describe "overall" student enrollment, not just vocational enrollments. At AVS, of course, "overall" enrollment is synonymous with vocational enrollment.

- **On average across school districts, math and science requirements for high school graduation have increased by approximately one half of a full-year course or Carnegie unit over the past five years.**

In math and science, there has been a shift away from requiring a single course for graduation toward requiring two or three courses. While only 7% of districts required three or more math courses for graduation in 1982-83, by 1986-87 this proportion had risen to 24%. In addition, 51% of districts raised their math requirement by one course or more between 1982-83 and 1986-87. In science, 88% of districts required at least two courses in 1986-87, compared with only 55% of districts in 1982-83. Approximately 40% of districts increased their science requirements by one course over the past five years.

- **The percentage of districts requiring vocational education courses for graduation rose from 18% in 1982-83 to 34% in 1986-87.**

Fourteen percent of districts required only one vocational course for graduation in 1982-83, and 4% required from two to six courses. In 1986-87, 24% of districts required one vocational course for graduation, and 10% required from two to six courses. While most districts do not have a vocational education requirement per se, 76% of districts count vocational courses with academic content towards graduation requirements.

## 3.0 AMOUNT OF PERKINS' DOLLARS SPENT IN 1986-87

### 3.1 Introduction

The Perkins Act directed states to apportion their basic vocational education grants from the federal government in the following way: 57% to the Vocational Education Opportunities Program to fund programs for special populations (Title IIA funds); and 43% to the Vocational Education Improvement, Innovation and Expansion Program to expand or develop high quality education programs (Title IIB funds). The major focus of the secondary and postsecondary surveys was on describing the size of the Perkins' allocations received and the way in which districts and institutions spent these federal vocational education dollars.

This chapter describes the amount of Perkins' funds spent by different types of vocational providers and the proportion of districts and institutions receiving Perkins' funds. The next chapter discusses the use of Perkins' funds and categorizes these expenditures into various instructional and service categories. In both chapters, our focus is on the amount of Perkins' funds spent during the 1986-87 school year. Since states have 27 months in which to spend each year's federal allocation, we asked for all dollars spent in a 12-month period regardless of the federal fiscal year. In addition, states vary in their rulings on the ability for local districts and institutions to carry funds over from one fiscal year to the next. Thus, in order to describe the use of federal vocational funds within a single school year and to provide a constant timeframe for all respondents, survey questions were phrased in terms of actual expenditures during the 1986-87 school year.

In order to interpret the survey results, it is important to first lay out the directions stipulated by the Perkins Act for the distribution and use of these federal funds. Thus, before the data are presented, we will describe briefly some of the key features of the 1984 law.

The Title IIA set-asides continued the objectives mandated by the 1976 Amendments to the Vocational Education Act for vocational programs for handicapped and disadvantaged students. Disadvantaged students include economically and academically disadvantaged, as well as students with limited English proficiency. However, in a departure from previous legislation, the Perkins Act stipulated that funds for handicapped and disadvantaged students

must be distributed by a federally-specified formula based on the relative number of handicapped and disadvantaged students enrolled in vocational programs and the number of economically disadvantaged students enrolled in the district or institution. Districts with a high proportion of handicapped or disadvantaged students should receive a substantial share of set-aside dollars.

Further, the Perkins Act mandated that the federal dollars for handicapped and disadvantaged students could be used only for the additional or excess costs of supplemental services or programs for these students. This stipulation necessitates that local vocational providers be able to identify either the costs of programs for handicapped and disadvantaged students that exceed the per pupil costs of non-handicapped and non-disadvantaged students or the specific additional services provided to handicapped and disadvantaged students.

In addition to providing funds targeted for handicapped and disadvantaged students, the Perkins Act defined four new target groups as special populations for federal vocational funds: adults in need of training and retraining; single parents or homemakers; participants in programs designed to eliminate sex bias and stereotyping in vocational education; and incarcerated individuals. Since the funds for incarcerated individuals comprise only one percent of Title II, the Basic State Grants, and flow to different types of institutions, we did not inquire about these funds on the survey.

The Perkins' funds for handicapped and disadvantaged students and for adults must be matched either by state or local funds. Thus, in order for districts and institutions to access federal dollars for vocational education, matching funds must be available. It is a state policy decision as to whether these matching funds come from state monies or from local sources.

Definitions of each of the special populations, taken from the Department of Education's regulations concerning the Perkins legislation, were printed on each survey. On the secondary survey, questions about services and programs for disadvantaged students were included as separate items for academically disadvantaged, economically disadvantaged and limited-English-proficient (LEP) students. Separate questions about the subgroups of disadvantaged students were not asked on the postsecondary survey. The definitions on the secondary survey were as follows:

- "Handicapped" refers to both physical and mental handicapping conditions. Handicapped students include students who are mentally retarded, hard of hearing, deaf, speech or language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or persons with specific learning disabilities; and who require special services and assistance in order to enable them to succeed in vocational education programs.

- "Academically disadvantaged" refers to a student who scores at or below the 25th percentile on a standardized achievement or aptitude test, whose secondary school grades are below 2.0 on a 4.0 scale, or who fails to attain minimal academic competencies; and who requires special services and assistance to enable them to succeed in vocational education programs. It does not include students with learning disabilities.

- "Economically disadvantaged" refers to an individual identified as low income by an indicator such as: annual family income at or below the poverty level established by the Office of Management and Budget, eligibility for free or reduced-price school lunch, or eligibility for Aid to Families with Dependent Children or other public assistance program; and who requires special services and assistance to enable them to succeed in vocational education programs.

- "Limited English proficiency" refers to individuals whose native language is a language other than English; or who come from an environment where a language other than English is dominant; or who come from an environment where a language other than English has had a significant impact on their level of English proficiency; and who have sufficient difficulty speaking, reading, writing or understanding the English language to deny these students the opportunity to learn successfully in vocational education classes where the language of instruction is English.

- "Single parent" refers to an individual who is unmarried or legally separated from a spouse and has a minor child or children for whom the parent has either custody or joint custody. "Homemaker" refers to an individual who is an adult and has worked as an adult primarily without remuneration to care for the home and family, and for that reason has diminished marketable skills.

- "Adults" include individuals who have graduated from or left high school and who need additional vocational education for entry into the labor force; unemployed individuals who require training to obtain employment or increase their employability; or employed individuals who require retraining to retain their jobs or training to upgrade their skills to qualify for higher paid or more dependable employment.

- "Sex equity" refers to programs, services and activities designed to eliminate sex bias and stereotyping of career options and educational programs.

Similar definitions appear on the postsecondary survey, with some modifications specific to that population (e.g., eligibility for Pell Grants as one criterion of economically disadvantaged).

In addition to questions about Title IIA funds for special populations, the surveys asked about Title IIB funds for program improvement. The Perkins Act includes a list of twenty-four categories for the potential use of Title IIB funds. These include the introduction or expansion of innovative programs; renovation of facilities; the purchase of new or updated equipment; curriculum development; and other services such as day care, stipends, and job placement. These funds also are subject to matching requirements.

### 3.2 Districts and Institutions Spending Perkins' Funds During 1986-87

In this section, we look at the proportion of districts and institutions spending Perkins' funds. Here the emphasis is on spending as a dichotomous variable: what proportion of districts and institutions spent any Perkins' funds during 1986-87. The amount of money spent will be presented in Section 3.3. In this section, we also compare the types of districts and institutions spending Perkins' funds with those that did not spend these federal vocational dollars. Five descriptor variables are explored in relation to spending: (1) student enrollment; (2) urbanicity; (3) percentage of children below the poverty level; (4) percent of postsecondary students receiving Pell Grants; and (5) percent of population that is nonwhite. In addition, the reasons why vocational providers did not receive Perkins' funds are reported.

Proportion of Districts and Secondary AVS with Eligible Students

Since this study was the first national survey of vocational education in nearly a decade, a key question of interest was: "Who is spending federal funds for vocational education?". In addition, since Perkins' funds for disadvantaged and handicapped students now are distributed by a federally-specified formula, it was of interest to look at what types of districts are not spending federal funds.

On the secondary survey, sections about funds for handicapped, disadvantaged and limited-English-proficient students began with questions asking whether students of each type were enrolled in vocational programs in the district or AVS. The primary purpose of these questions was to guide respondents through the survey and allow those with no eligible students to skip sections of the questionnaire. However, these questions also provide information about the proportion of LEAs with students eligible for Perkins' allocations.

Exhibit 3.1 displays the weighted percentage of school districts and secondary area vocational schools reporting handicapped, disadvantaged, and limited-English-proficient (LEP) students in vocational programs. The results indicate that all of the AVS serve academically or economically disadvantaged students and nearly all (97%) report handicapped students in vocational programs. However, only 26% of AVS have LEP students enrolled.

Among school districts, 93% report academically or economically disadvantaged students enrolled in vocational education. Handicapped students are enrolled in vocational education in 84% of districts, but only 19% of districts report LEP students in vocational programs.

A comparison of the proportion of districts and AVS with handicapped and disadvantaged students in vocational education indicates that a higher proportion of AVS than districts serve students from these two special populations in vocational education. These result should have implications both for the amount of Perkins' funds allocated to AVS as well as programmatic impact on the educational and support needs of students in the area vocational schools. However, the differences, although statistically significant, are not large. The majority of school districts also have handicapped and academically or economically disadvantaged students enrolled in vocational education.

Exhibit 3.1

National Estimates of Percentage of School Districts and Secondary Area Vocational Schools (AVS) with Handicapped, Disadvantaged and Limited-English-Proficient Students Enrolled in Vocational Education During 1986-87

| Type of Student | % of Districts[a] | (Weighted n) | % of AVS[b] | (Weighted n) | $x^2$ Statistic of Group Differences (Measure of Association) | |
|---|---|---|---|---|---|---|
| Handicapped | 84.3 | (9,670) | 97.4 | (838) | 31.75*** | (.17) |
| Academically or economically disadvantaged | 93.1 | (10,685) | 100.0 | (861) | 18.68*** | (.13) |
| Limited-English-proficient | 18.6 | (2,136) | 26.3 | (227) | 7.12** | (.08) |

[a] Unweighted total n = 841

[b] Unweighted total n = 277

** $p<.01$
*** $p<.001$

Proportion of Districts and Secondary AVS Spending Funds

Exhibit 3.2 presents the proportion of districts and secondary AVS spending Perkins' funds during 1986-87. The percentages shown are based on all districts and institutions responding, not just those with eligible students.

Approximately half of all school districts reported spending Perkins' funds for handicapped and disadvantaged students during 1986-87. Title IIB funds for program improvement were spent by 26% of cistricts. A small proportion of school districts spent funds for LEP students (7% of districts), adults (3%), single parents/homemakers (5%), or sex equity (7%). Overall, 63% of districts spent Perkins' funds in at least one category of IIA or IIB monies.

More than 80% of AVS reported spending Perkins' funds for handicapped and disadvantaged students during 1986-87. Approximately half of the secondary AVS spent program improvement funds, and about 30% spent funds for adults, single parents/homemakers, or sex equity. Title IIA funds for LEP students were spent by 16% of the AVS. Overall, 91% of AVS spent Perkins' funds in at least one category of IIA or IIB monies.

The results displayed in Exhibit 3.2 indicate that the percentages of AVS spending Perkins' funds for handicapped, disadvantaged and LEP students are nearly double the percentages seen among school districts. The proportion of AVS spending funds for program improvement is also twice that of school districts. In addition, a significantly higher percentage of AVS than districts spent Perkins' funds for adults, single parents and sex equity. Combining spending across Title IIA and IIB funds, significantly more AVS (91%) than districts (63%) reported expenditures in at least one funding category.

To explore whether the differences in the percentage of secondary LEAs with eligible students affects the results reported in Exhibit 3.2, the comparison between school districts and AVS spending handicapped and LEP funds also was computed only for those respondents with eligible students. The differences in the proportion of districts and AVS spending funds are still statistically significant. For example, the weighted proportion of school

Exhibit 3.2

National Estimates of Percentage of School Districts and Secondary Area Vocational Schools (AVS) Spending Perkins' Funds During 1986-87

| Category of Perkins' Funds | School Districts[a] | | Secondary AVS[b] | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|
| | % Spending | (Weighted n) | % Spending | (Weighted n) | |
| Handicapped | 48.5 | (5,562) | 82.2 | (707) | 94.89*** (.29) |
| Disadvantaged | 50.2 | (5,759) | 82.8 | (712) | 89.35*** (.28) |
| Limited-English-proficient | 7.0 | (799) | 16.4 | (142) | 21.04*** (.14) |
| Adult | 3.4 | (382) | 29.3 | (245) | 151.01*** (.38) |
| Single parent/homemaker | 5.4 | (615) | 31.3 | (268) | 130.83*** (.35) |
| Sex equity | 7.2 | (826) | 29.4 | (256) | 90.81*** (.29) |
| Program improvement | 26.1 | (2,970) | 51.0 | (443) | 58.19*** (.23) |
| Any Perkins' funds | 62.5 | (6,735) | 90.8 | (771) | 75.66*** (.27) |

[a]Unweighted total n for handicapped, disadvantaged and LEP = 841; adults = 826; single parent = 835; sex equity = 840; program improvement = 834; any Perkins' funds = 808

[b]Unweighted total n for handicapped and disadvantaged, LEP and sex equity = 277; adults = 272; single parent = 275; program improvement = 274; any Perkins' funds = 275

*** $p < .001$

districts with handicapped students spending these Title IIA funds is 57.5% (5562/9670); the denominator, the number of eligible districts, is shown in Exhibit 3.1. In contrast, 84.4% of AVS (707/838) with handicapped students spent these Perkins' funds in 1986-87. This difference is statistically significant ($X^2$ = 60.43, $p < .0001$, measure of association = .25). For LEP students, 62.5% of eligible AVS (142/227) compared with 37.4% of school districts (799/2136) spent these funds ($X^2$ = 11.59, $p < .001$, measure of association = .23).

Proportion of Postsecondary Institutions Spending Perkins' Funds

The proportion of postsecondary institutions spending each category of Perkins' funds during 1986-87 is presented in Exhibit 3.3. Data are presented separately for community colleges and other types of postsecondary institutions (i.e., postsecondary area vocational schools, technical institutes and four-year colleges).

The results indicate that the majority of community colleges offering vocational programs spent Perkins' handicapped (67%), disadvantaged (72%) and program improvement funds (65%). Nearly 60% of community colleges reported expenditures of Perkins' funds for single parents/homemakers. Perkins' funds for adults were spent by 44% of community colleges; sex equity funds were spent by 39% of these postsecondary institutions. Overall, 85% of community colleges spent money in at least one category of Title IIA or IIB funds.

Approximately half of the other types of postsecondary institutions reported spending Perkins' handicapped (49%), disadvantaged (54%) and program improvement funds (51%). Approximately one third (34%) spent funds for single parents/homemakers, while fewer spent funds for adults (30%) and sex equity (21%). Overall, 74% of these institutions reported expenditures in at least one category of Title IIA or IIB funds.

As the results in Exhibit 3.3 indicate, in each category of Perkins' funds community colleges were more likely to have spent money than were other types of postsecondary institutions offering vocational programs. This relationship is strongest for single parent/homemaker funds, where 58% of community colleges spent these federal dollars as compared with 34% of other types of postsecondary institutions.

Exhibit 3.3

National Estimates of Percentage of Postsecondary Institutions Spending Perkins' Funds During 1986-87

| Category of Perkins' Funds | Community Colleges[a] % Spending | (Weighted n) | Other Postsecondary[b] % Spending | (Weighted n) | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|
| Handicapped | 67.4 | (645) | 49.1 | (431) | 14.13*** (.19) |
| Disadvantaged | 71.8 | (679) | 54.0 | (466) | 13.73*** (.18) |
| Adult | 44.3 | (409) | 29.5 | (248) | 9.02** (.15) |
| Single parent/homemaker | 58.2 | (550) | 34.4 | (294) | 23.18*** (.24) |
| Sex equity | 39.1 | (364) | 21.2 | (185) | 15.34*** (.20) |
| Program improvement | 65.3 | (626) | 51.4 | (442) | 7.96** (.14) |
| Any Perkins' funds | 84.8 | (801) | 73.9 | (640) | 7.15** (.14) |

[a]Unweighted total n for handicapped = 313; disadvantaged = 310; adult = 304; single parent = 312; sex equity = 308; program improvement = 316; any Perkins' funds = 308

[b]Includes area or regional vocational schools, technical institutes and four-year colleges; Unweighted total n for handicapped and sex equity = 114; disadvantaged = 113; adult and program improvement = 111; single parent = 112; any Perkins' funds = 112

** $p < .01$
*** $p < .001$

Comparing Proportions of Secondary and Postsecondary Providers Spending Funds

Since the Perkins Act did not stipulate how funds should be split between secondary and postsecondary providers, it is of interest to look at differences in the proportion spending Perkins' funds at these two education levels. Exhibit 3.4 shows the proportion of secondary providers (i.e., districts and secondary AVS combined) and postsecondary providers (i.e., community colleges and other types of postsecondary institutions combined) spending Perkins' funds during 1986-87.

For handicapped funds, a similar proportion of secondary (57%) and postsecondary (59%) respondents reported expenditures during 1986-87. Similarly, there are not marked differences in the proportion of secondary and postsecondary providers spending disadvantaged funds (58% versus 63%).

As would be expected, a greater proportion of postsecondary institutions than secondary LEAs spent Perkins' funds for adults (37% versus 10%) and for single parents/homemakers (47% versus 12%). However, one caveat to these findings is that school districts and secondary AVS were instructed on the survey to focus on Perkins' funds spent for secondary vocational education. Thus, it is possible that secondary LEAs could have spent adult funds in postsecondary certificate or degree programs associated with adult or community education. In addition, the federal legislation excluded pregnant women from the single parent category, so that programs for pregnant teens, a likely scenario at the secondary level, could not be recipients of these Title IIA funds.

Postsecondary institutions were more likely than secondary LEAs to spend Perkins' funds to promote sex equity and program improvement. Approximately 30% of postsecondary institutions reported spending sex equity funds in 1986-87, compared with only 13% of secondary respondents. Nearly 60% of postsecondary institutions spent program improvement funds, compared with 32% of secondary providers.

Reasons Why Districts and Institutions Did Not Receive Perkins' Funds

If a district or institution was not awarded Perkins' money in a category of Title IIA or IIB funds, survey respondents were asked to indicate

Exhibit 3.4

Comparing Percentage of Secondary and Postsecondary Providers Spending Perkins' Funds During 1986-87

| Category of Perkins' Funds | Secondary[a] % Spending | Secondary[a] (Weighted n) | Postsecondary[b] % Spending | Postsecondary[b] (Weighted n) | $X^2$ Statistic of Group Differences (Measure of Association) | |
|---|---|---|---|---|---|---|
| Handicapped | 56.8 | (6269) | 58.6 | (1076) | 0.36 | (.02) |
| Disadvantaged | 58.2 | (6472) | 63.3 | (1144) | 3.05 | (.05) |
| Adult | 9.7 | (627) | 37.2 | (657) | 156.82*** | (.33) |
| Single parent/homemaker | 11.8 | (882) | 46.9 | (843) | 221.72*** | (.38) |
| Sex equity | 12.7 | (1082) | 30.4 | (549) | 65.30*** | (.21) |
| Program improvement | 32.3 | (3413) | 58.7 | (1068) | 89.17*** | (.24) |
| Any Perkins' funds | 69.8 | (7506) | 79.6 | (1441) | 14.15*** | (.10) |

[a]Unweighted total n for handicapped, disadvantaged and LEP = 1118; adult = 1098; single parent = 1110; sex equity = 1117; program improvement = 1108; any Perkins' funds = 1083

[b]Unweighted total n for handicapped and program improvement = 427; disadvantaged = 423; adult = 415; single parent = 424; sex equity = 422; any Perkins' funds = 420

*** p <.001

the most important reason why these funds were not received. Response options included general reasons, such as not knowing about the availability of funds in a particular category, as well as issues directly tied to the Perkins legislation, such as matching funds and identifying excess costs. The response rate to these questions is somewhat lower than to the earlier questions about funding. Since the small numbers do not yield reliable national estimates, these results should be interpreted with caution and viewed as informative but not conclusive.

Exhibit 3.5 presents the reasons cited by districts, secondary AVS and postsecondary institutions for not receiving Perkins' Title II funds. Across all categories of funds, the majority of districts that did not receive Perkins' fund indicated that they did not apply for these federal dollars because the likely award was too small. In each funding category, between 50-60% of respondents from school districts indicated that this was the most important reason why Perkins' funds were not received. In contrast, approximately 20-30% of secondary AVS and 15-30% of postsecondary institutions indicated that they did not apply for funds because of the size of the award. In all categories, there is a moderate relationship and statistically significant difference among the percentage of providers choosing this reason.

Postsecondary institutions were more likely than secondary LEAs to indicate that they did not know about categories of Perkins' funds. For example, more than half of the postsecondary respondents to this question indicated that they did not know about Perkins' funds for handicapped and disadvantaged students or about program improvement funds.

The requirement that federal dollars for handicapped and disadvantaged funds be matched was cited as a difficulty in accessing funds by only a small percentage of respondents. Approximately 10-20% of respondents indicated that they did not know what funds were available as matching funds. This proportion is fairly equivalent for handicapped, disadvantaged, adult and program improvement funds. There also are no significant differences in the proportion of districts, AVS and postsecondary institutions reporting difficulty matching funds.

The excess cost stipulation for Perkins' handicapped and disadvantaged funds was cited as a problem by more respondents from AVS than from districts or postsecondary institutions. Approximately 17% of AVS

Exhibit 3.5

National Estimates of Reasons Perkins' Funds Not Received by School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions in 1986-87

| Category of Perkins' Funds | Reason Funds Not Received | School District | Secondary AVS | Postsecondary Institution | $X^2$ Statistic of Group Differences (Measure of Association) | |
|---|---|---|---|---|---|---|
| Handicapped | Did not know about program | 7.0 | 7.9 | 50.2 | 66.28*** | (.48) |
| | Not eligible for these funds | 12.4 | 39.4 | 6.6 | 15.30** | (.23) |
| | Application rejected | 2.7 | 1.7 | 0.0 | 1.82 | (.08) |
| | Did not apply: award too small | 62.8 | 21.0 | 15.1 | 51.57*** | (.42) |
| | Did not apply: unsure of match | 8.7 | 17.2 | 16.9 | 4.11 | (.12) |
| | Did not apply: could not identify eligible students | 2.0 | 0.0 | 8.9 | 7.71* | (.16) |
| | Did not apply: could not match | 12.8 | 4.6 | 8.6 | 1.89 | (.08) |
| | Did not apply: could not identify excess costs | 3.1 | 17.3 | 1.8 | 11.27** | (.20) |
| | WEIGHTED TOTAL N: | 2733 | 65 | 273 | | |
| | UNWEIGHTED TOTAL N: | 111 | 18 | 38 | | |
| Disadvantaged | Did not know about program | 8.0 | 7.4 | 53.8 | 65.36*** | (.49) |
| | Not eligible for these funds | 12.9 | 24.5 | 7.7 | 4.13 | (.12) |
| | Application rejected | 2.9 | 0.0 | 2.0 | 0.80 | (.05) |
| | Did not apply: award too small | 61.8 | 28.2 | 16.9 | 40.38 | (.39) |
| | Did not aply: unsure of match | 10.9 | 20.3 | 18.5 | 3.27 | (.11) |
| | Did not apply: could not identify eligible students | 2.7 | 0.0 | 5.9 | 2.28 | (.09) |
| | Did not apply: could not match | 15.8 | 4.3 | 9.3 | 3.37 | (.11) |
| | Did not apply: could not identify excess costs | 4.6 | 17.8 | 1.0 | 9.93** | (.19) |
| | WEIGHTED TOTAL N: | 2524 | 70 | 250 | | |
| | UNWEIGHTED TOTAL N: | 115 | 19 | 31 | | |

(continued)

Exhibit 3.5 (continued)

| Category of Perkins' Funds | Reason Funds Not Received | School District | Secondary AVS | Postsecondary Institution | $x^2$ Statistic of Group Differences (Measure of Association) | |
|---|---|---|---|---|---|---|
| Adult | Did not know about program | 15.5 | 18.5 | 35.5 | 22.06*** | (.20) |
| | Not eligible for these funds | 23.7 | 33.5 | 9.3 | 17.69*** | (.18) |
| | Application rejected | 0.9 | 4.3 | 6.4 | 12.48** | (.15) |
| | Did not apply: award too small | 53.6 | 36.4 | 23.5 | 34.95*** | (.25) |
| | Did not apply: unsure of match | 9.3 | 7.9 | 13.5 | 2.21 | (.06) |
| | Did not apply: proposal | 19.0 | 20.8 | 28.7 | 4.94 | (.09) |
| | WEIGHTED TOTAL N: | 5064 | 262 | 488 | | |
| | UNWEIGHTED TOTAL N | 405 | 82 | 79 | | |
| Single parent/ homemaker | Did not know about program | 17.2 | 3.1 | 28.1 | 20.35*** | (.19) |
| | Not eligible for these funds | 22.4 | 28.8 | 10.9 | 9.02* | (.13) |
| | Application rejected | 0.6 | 9.1 | 11.6 | 31.57*** | (.24) |
| | Did not apply: award too small | 56.5 | 33.3 | 27.2 | 33.88*** | (.25) |
| | Did not apply: proposal | 19.9 | 21.2 | 23.7 | 0.63 | (.03) |
| | WEIGHTED TOTAL N: | 4957 | 280 | 384 | | |
| | UNWEIGHTED TOTAL N: | 383 | 102 | 74 | | |
| Sex equity | Did not know about program | 15.8 | 9.1 | 21.5 | 6.03* | (.10) |
| | Not eligible for these funds | 14.5 | 17.7 | 7.1 | 6.26* | (.10) |
| | Aplication rejected | 1.5 | 6.8 | 7.2 | 11.73** | (.14) |
| | Did not apply: award too small | 62.4 | 48.5 | 30.1 | 41.12*** | (.27) |
| | Did not apply: proposal | 20.4 | 23.9 | 35.3 | 11.65** | (.14) |
| | WEIGHTED TOTAL N: | 4811 | 270 | 566 | | |
| | UNWEIGHTED TOTAL N: | 358 | 91 | 107 | | |
| Program improvement | Did not know about program | 20.9 | 30.6 | 51.4 | 22.17*** | (.25) |
| | Not eligible for these funds | 13.6 | 22.5 | 8.0 | 5.17 | (.12) |
| | Application rejected | 2.1 | 6.3 | 0.7 | 4.26 | (.11) |
| | Did not apply: award too small | 58.9 | 31.1 | 12.3 | 47.60*** | (.36) |
| | Did not apply: unsure of match | 11.3 | 13.1 | 19.6 | 2.87 | (.09) |
| | Did not apply: proposal | 18.5 | 15.3 | 6.2 | 5.25* | (.12) |
| | WEIGHTED TOTAL N: | 3301 | 180 | 245 | | |
| | UNWEIGHTED TOTAL N: | 190 | 48 | 40 | | |

* $p < .05$
** $p < .01$
*** $p < .001$

indicated that this was an important reason why they did not apply for Perkins' funds in these two categories. In contrast, less than 5% of school districts or postsecondary institutions selected this response.

Twenty to thirty percent of the secondary AVS indicated that they did not receive Perkins' IIA or IIB funds because they were not eligible for these federal dollars. Based on comments written on the surveys, it appears that in some cases federal dollars flow to the AVS through school districts. In this way, a small percentage of AVS receive no federal dollars directly.

Student Enrollments in Districts and Institutions Spending Funds

Exhibit 3.6 presents a comparison of the average student enrollments in districts and institutions spending versus not spending each category of Perkins' funding in 1986-87. In school districts and secondary area vocational schools, there is a consistent pattern across funding categories that LEAs spending Perkins' funds have higher student enrollments than those not spending these federal dollars. Among secondary AVS, these differences are not large and only statistically significant for adult and sex equity funds. However, among school districts, LEAs spending handicapped, disadvantaged or program improvement funds have approximately three times as many students as districts not spending these three categories of Perkins' funds.

At the postsecondary level, the only meaningful relationship between student enrollment and Perkins' funds is seen with program improvement monies. Specifically, institutions spending Perkins' Title IIB funds, on average, are nearly three times larger than those not spending these funds.

Taken together, these results suggest that at the secondary level Perkins' funds are going to larger school districts and to area vocational schools regardless of size. This distribution of funding is expected for handicapped and disadvantaged funds, which are distributed by formula related to size. However, it is also interesting that larger districts and postsecondary institutions are more likely to be recipients of program improvement funds.

Exhibit 3.6

National Estimates of Student Enrollments in Districts and Institutions Spending Perkins' Funds During 1986-87

| Type of District/ Institution | Category of Perkins' Funds (Weighted total n) | Spent Funds: Average Enrollment | Spent Funds: (Unweighted n) | Did Not Spend Funds: Average Enrollment | Did Not Spend Funds: (Unweighted n) | t-test of Group Differences |
|---|---|---|---|---|---|---|
| School district | Handicapped (11,077) | 1477 | (569) | 432 | (226) | 4.06*** |
| | Disadvantaged (11,077) | 1385 | (565) | 487 | (230) | 3.60*** |
| | Limited-English-proficient (11,077) | 3615 | (140) | 741 | (655) | 2.20* |
| | Adult (10,913) | 6236 | (89) | 760 | (696) | 1.68 |
| | Single parent (10,990) | 4527 | (119) | 756 | (670) | 1.83 |
| | Sex equity (11,059) | 4204 | (156) | 708 | (638) | 2.25* |
| | Program improvement (11,018) | 1948 | (393) | 591 | (397) | 2.88** |
| Secondary area vocational school | Handicapped (728) | 1886 | (199) | 1294 | (33) | 1.74 |
| | Disadvantaged (728) | 1853 | (198) | 1428 | (34) | 1.24 |
| | Limited-English-proficient (728) | 3786 | (27) | 1398 | (205) | 2.00 |
| | Adult (714) | 2784 | (91) | 1283 | (137) | 2.01* |
| | Single parent (737) | 2413 | (73) | 1443 | (156) | 1.53 |
| | Sex equity (720) | 2748 | (86) | 1359 | (145) | 2.03* |
| | Program improvement (748) | 2129 | (138) | 1370 | (93) | 1.76 |
| Postsecondary institution | Handicapped (1663) | 3023 | (288) | 4211 | (102) | -1.26 |
| | Disadvantaged (1647) | 3757 | (309) | 3185 | (78) | 0.77 |
| | Adult (1595) | 3550 | (218) | 2751 | (160) | 1.30 |
| | Single parent (1630) | 4216 | (245) | 3000 | (142) | 1.34 |
| | Sex equity (1637) | 4004 | (184) | 3378 | (202) | 0.75 |
| | Program improvement (1660) | 4794 | (289) | 1706 | (102) | 3.63*** |

* p<.05
** p<.01
*** p<.001

Percentage of Urban, Suburban and Rural Districts Spending Perkins' Funds

Using census data, school districts were categorized as urban, suburban or rural. The weighted national estimates indicate that 3.4% of districts are in urban areas, 24.8% are in suburban areas and 71.8% are classified as rural. This information was not available for AVS or postsecondary institutions, which draw students from a wider, and often undefined, area.

Exhibit 3.7 presents the proportion of urban, suburban and rural districts spending Perkins' funds. Across all categories of funds, a higher proportion of urban districts than districts in suburban or rural areas spent Perkins' funds during 1986-87. Nearly all urban districts (94%) spent handicapped and disadvantaged funds, compared with 54% of suburban and approximately 45% of rural districts. Half of the districts in urban areas spent Perkins' funds for LEP students, when only 11% of suburban districts and 3% of rural districts reported spending these funds. The majority of urban districts (56%) also spent program improvement funds, compared with 29% of suburban and 23% of rural districts.

While not a majority, a higher percentage of urban districts spent Perkins' funds for adults, single parents/homemakers and sex equity than did districts in rural or suburban areas. For example, approximately 31% of urban districts spent Perkins' funds for single parents/homemakers and sex equity, while fewer than 10% of suburban or rural districts reported spending these funds. For adult monies, 16% of urban districts spent funds, compared with 5% of suburban and 2% of rural districts. Combining all categories of Title IIA and IIB funds, nearly all urban districts (97%) spent money in at least one funding category, compared with 66% of suburban districts and 60% of rural districts.

Percentage Below Poverty Level in Districts Spending Perkins' Funds

The percentage of children below the federal poverty level, taken from census data, was computed for school districts responding to the survey. The weighted estimates based on the sample data indicate that, on average, 15.7% of children in school districts nationally are below the poverty level, with a median of 13% and a range from 2% to 62%. Using these census data, the average percentage of poverty was computed for school

Exhibit 3.7

National Estimates of Percentage of Urban, Suburban and Rural School Districts Spending Perkins' Funds During 1986-87

| Category of Perkins' Funds (Weighted total n) | Percent Spending Funds | | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | Urban (Unweighted n) | Suburban (Unweighted n) | Rural (Unweighted n) | |
| Handicapped (11,414) | 94.1 (104) | 54.4 (254) | 44.2 (241) | 30.79*** (.19) |
| Disadvantaged (11,414) | 94.1 (102) | 54.1 (248) | 46.9 (245) | 25.63*** (.17) |
| Limited-English-proficient (11,414) | 50.0 (49) | 11.3 (79) | 3.4 (22) | 98.71*** (.34) |
| Adult (11,174) | 15.8 (31) | 4.9 (40) | 2.2 (23) | 17.39** (.15) |
| Single parent (11,326) | 31.2 (41) | 6.5 (60) | 3.8 (33) | 40.23*** (.22) |
| Sex equity (11,395) | 31.7 (47) | 9.3 (75) | 5.2 (46) | 31.22*** (.19) |
| Program improvement (11,330) | 55.8 (79) | 29.2 (179) | 23.3 (58) | 16.32*** (.14) |
| Any Perkins' funds (10,709) | 96.9 (107) | 65.6 (274) | 59.8 (292) | 16.71*** (.15) |

** p<.01
*** p<.001

districts spending Perkins' funds and compared with poverty rates in districts that did not spend funds. These results are displayed in Exhibit 3.8.

Although there are a few statistically significant differences in the percentage of poverty between districts spending and not spending Perkins' funds, the differences are small in magnitude. For example, the average percentage of poverty in districts spending Perkins' funds for disadvantaged students is 17%, compared with 15% among districts not spending these federal dollars. Moreover, three of the four statistically significant differences suggest that districts that did not spend Perkins' funds have higher poverty rates than districts that did spend funds. Again, these differences are small in magnitude, such as 16% poverty among districts not spending single parent money versus 13% among districts spending these funds.

Overall, the percentage of poverty among districts spending funds in at least one category of Title IIA or IIB monies is nearly equivalent to the poverty level in districts spending no Perkins' funds (16.2% versus 15.5%). Taken together, these results suggest that there is not a strong relationship between the poverty level of the population within a school district, in and of itself, and the likelihood of spending Perkins' funds.

Percentage of Nonwhites in Districts Spending Perkins' Funds

Census data were available on the percentage of the population that is white within school district boundaries. This information was converted into the percentage of nonwhites in the population, by taking the reciprocal of the percentage from the census data. The average percentage of nonwhites in school districts nationally, estimated from our sample data, is 12.6%, with the median of 4%. This information was used to compare the average percentage of nonwhites in districts spending Perkins' funds with that of districts not spending these federal dollars. The results are displayed in Exhibit 3.9.

For each category of funds, districts spending Perkins' dollars have a significantly higher proportion of nonwhites than districts that did not report Perkins' expenditures. In particular, districts spending LEP funds are, on average, 29% nonwhite, compared with 11% in districts not spending these funds. The proportion of nonwhites in districts spending disadvantaged funds is nearly twice that of districts not spending these funds (17% versus 9%). For adult, single parent and sex equity funds, the proportion of

Exhibit 3.8

National Estimates of Percentage of Children Below the Poverty Level
in School Districts Spending Perkins' Funds

| Category of Perkins' Funds (Weighted total n) | Spent Funds: Average % Below Poverty Level | Spent Funds: (Unweighted n) | Did Not Spend Funds: Average % Below Poverty Level | Did Not Spend Funds: (Unweighted n) | t-test of Group Differences |
|---|---|---|---|---|---|
| Handicapped (11,318) | 16.0 | (595) | 15.5 | (232) | 0.07 |
| Disadvantaged (11,319) | 16.6 | (591) | 14.9 | (236) | 2.46* |
| Limited-English-proficient (11,319) | 16.2 | (149) | 15.7 | (678) | 0.37 |
| Adult (11,080) | 15.0 | (94) | 15.6 | (718) | -0.35 |
| Single parent (11,231) | 12.9 | (133) | 16.0 | (688) | -2.79** |
| Sex equity (11,300) | 13.2 | (166) | 15.9 | (660) | -2.63* |
| Program improvement (11,236) | 14.4 | (415) | 16.2 | (405) | -2.49* |
| Any Perkins' funds (10,614) | 16.2 | (669) | 15.5 | (125) | -0.92 |

* p<.05
** p<.01

Exhibit 3.9

National Estimates of Percentage of Nonwhites in School Districts Spending Perkins' Funds

| Category of Perkins' Funds (Weighted total n) | Spent Funds: Average % Nonwhite | Spent Funds: (Unweighted n) | Did Not Spend Funds: Average % Nonwhite | Did Not Spend Funds: (Unweighted n) | t-test of Group Differences |
|---|---|---|---|---|---|
| Handicapped (11,414) | 15.9 | (599) | 9.5 | (233) | 5.00*** |
| Disadvantaged (11,413) | 16.7 | (595) | 8.5 | (237) | 6.54*** |
| Limited-English-proficient (11,413) | 28.7 | (150) | 11.4 | (682) | 5.92*** |
| Adult (11,175) | 22.4 | (94) | 12.2 | (723) | 2.39* |
| Single parent (11,325) | 19.8 | (134) | 12.1 | (692) | 2.38* |
| Sex equity (11,395) | 20.0 | (168) | 12.0 | (663) | 2.62* |
| Program improvement (11,330) | 17.0 | (416) | 11.0 | (409) | 3.87*** |
| Any Perkins' funds (10,708) | 15.4 | (673) | 7.5 | (126) | 6.49*** |

* p<.05
** p<.01
*** p<.001

nonwhites among spending districts averaged approximately 20% compared with an average of 11-12% nonwhite among districts not spending these funds. Overall, districts spending funds in at least one category of Title IIA or IIB monies have a significantly higher percentage of nonwhites than districts not spending Perkins' funds (15% versus 8%).

Percentage of Pell Grant Recipients in Postsecondary Institutions Spending Perkins' Funds

In order to calculate a poverty index for postsecondary institutions, information was obtained about the number of Pell Grant recipients. This figure was converted into a percentage of the FTE student enrollment in 1986-87. The weighted percentage of students receiving Pell Grants among all postsecondary institutions averaged 33.2%, with a median of 26.4%. However, the average percentage of students in community colleges (31.1%) was significantly different ($t = 2.58$, $p = .01$) than in other types of postsecondary institutions (39.7%).

This difference might be due to the tendency for community colleges to have no or low tuition, so that economically disadvantaged students are less likely to need or receive financial assistance than in other, more expensive institutions. Community colleges also may have more part-time students than other types of postsecondary institutions. In addition, students in community colleges might be able to secure other types of financial assistance than students in technical institutes or four-year colleges.

Due to the differential prevalence of Pell Grants in community colleges, the relationship to Perkins' spending was computed separately for these and other types of postsecondary institutions. As Exhibit 3.10 illustrates, there are no statistically significant relationships between spending Perkins' funds and percentage of students receiving Pell Grants in community colleges. For disadvantaged funds, where the relationship should be strongest, a slightly higher percentage of students received Pell Grants (36%) in community colleges that did not spend Perkins' funds than in colleges spending these federal dollars (30%). On average, a higher percentage of students received Pell Grants in the small number of community colleges that did not spend any Title IIA or IIB funds than in those community colleges that spent funds in at least one category (40% versus 30%).

Exhibit 3.10

National Estimates of Percentage of Pell Grants
Awarded in Community Colleges and Other Postsecondary Institutions
Spending Perkins' Funds

| Type of Institution | Category of Perkins' Funds (Weighted total n) | Spent Funds | | Did Not Spend Funds | | t-test of Group Differences |
|---|---|---|---|---|---|---|
| | | % Pell Grants | (Unweighted n) | % Pell Grants | (Unweighted n) | |
| Community College | Handicapped (859) | 29.8 | (216) | 34.3 | (54) | -1.08 |
| | Disadvantaged (848) | 29.8 | (224) | 35.5 | (44) | -1.41 |
| | Adult (830) | 32.6 | (160) | 31.0 | (102) | 0.29 |
| | Single parent (850) | 26.8 | (189) | 37.5 | (80) | -1.92 |
| | Sex equity (837) | 26.7 | (141) | 34.2 | (125) | -1.72 |
| | Program improvement (860) | 30.6 | (217) | 32.5 | (55) | -0.47 |
| | Any Perkins' funds (851) | 29.6 | (251) | 40.2 | (17) | -2.33* |
| Postsecondary AVS, technical institute or four-year college | Handicapped (688) | 38.7 | (45) | 40.6 | (38) | -0.40 |
| | Disadvantaged (682) | 38.9 | (54) | 41.1 | (28) | -0.46 |
| | Adult (649) | 30.9 | (32) | 43.4 | (47) | -2.85** |
| | Single parent (663) | 31.2 | (29) | 44.3 | (51) | -2.98** |
| | Sex equity (682) | 40.6 | (20) | 39.6 | (62) | 0.14 |
| | Program improvement (685) | 33.6 | (43) | 46.4 | (39) | -2.68** |
| | Any Perkins' funds | 34.1 | (64) | 54.9 | (19) | -3.41** |

* $p<.05$
** $p<.01$

At other types of postsecondary institutions, there also are no significant relationships between prevalence of Pell Grants and spending Perkins' disadvantaged funds. Thirty-nine percent of students received Pell Grants in institutions spending disadvantaged funds, compared with 41% in institutions not spending these federal dollars. However, there is a tendency for institutions not spending Perkins' adult, single parent or program improvement funds to have a higher percentage of students receiving Pell Grants than institutions spending these funds. For program improvement funds, the difference is an average of 46% receiving Pell Grants among nonspending institutions, compared with 34% among spending institutions. Overall, 55% of students received Pell Grants in institutions that did not spend any Title IIA or IIB funds, compared with 34% of students receiving Pell Grants in institutions spending funds in at least one category of these federal dollars.

The lack of significant findings for community colleges and the unexpected relationship at other types of postsecondary institutions suggests that receiving Pell Grants may not be a good proxy for an index of poverty or economic disadvantage. There may be some other confounding variable affecting the likelihood of students receiving Pell Grants in a particular type of institution.

## 3.3 Amount of Perkins' Funds Spent by Districts and Institutions

Survey respondents were asked to record the amount of federal Perkins' funds spent during the 1986-87 school year in each category of Title IIA and IIB funds. In this section, we summarize these figures for school districts, secondary area vocational schools and postsecondary institutions. In addition, three composite indices were calculated: (1) the total amount of Perkins' funds spent across all categories; (2) the amount of total Perkins' funding per student; and (3) the proportion of Perkins' funds relative to the total district or institutional budget.

### Amount of Perkins' Monies Spent in each Funding Category

Exhibit 3.11 presents the summary statistics of the federal dollars spent by vocational providers during the 1986-87 school year. After describing these results, we discuss differences in the amount spent by school districts, secondary AVS and postsecondary institutions in each category of Title IIA and IIB funds.

Exhibit 3.11

National Estimates of Amount of Perkins' Funds Spent in 1986-87 by School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions

| Category of Perkins' Funds | Type of District/ Institution (Weighted n) | Amount of Funds Spent | | | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | Range (Unweighted n) | Total | |
| Handicapped | School district (5123) | $11,398 | $57,085 | $3,000 | $100-1,666,018 (567) | $58,391,011 | 7.51*** |
| | Secondary AVS (687) | $45,222 | $185,806 | $16,929 | $640-2,000,000 (234) | $31,090,071 | |
| | Postsecondary institution (1056) | $20,863 | $26,966 | $11,137 | $424-245,656 (304) | $22,022,977 | |
| Disadvantaged | School district (5204) | $19,627 | $79,416 | $4,000 | $100-2,905,173 (568) | $102,130,958 | 16.66*** |
| | Secondary AVS (687) | $54,952 | $92,090 | $27,418 | $793-1,000,000 (229) | $37,736,624 | |
| | Postsecondary institution (1136) | $43,729 | $56,752 | $22,734 | $300-750,000 (331) | $49,662,807 | |
| Limited-English-proficient (LEP) | School district (642) | $15,824 | $104,250 | $1,749 | $25-1,845,777 (134) | $10,160,012 | 0.04 |
| | Secondary AVS (99) | $11,895 | $21,792 | $3,026 | $30-100,000 (28) | $1,178,750 | |
| Adult | School district (355) | $64,564 | $164,616 | $9,500 | $27-1,520,157 (88) | $22,926,884 | 0.86 |
| | Secondary AVS (224) | $51,515 | $62,901 | $29,718 | $1,160-368,635 (109) | $11,564,235 | |
| | Postsecondary institution (612) | $43,938 | $55,888 | $25,900 | $22-397,280 (226) | $26,868,671 | |
| Single parent/ homemaker | School district (531) | $21,108 | $71,776 | $8,000 | $300-1,220,363 (123) | $11,199,480 | 2.67 |
| | Secondary AVS (227) | $35,121 | $21,805 | $32,696 | $2,500-113,229 (83) | $7,961,868 | |
| | Postsecondary institution (826) | $36,952 | $34,436 | $32,696 | $693-290,491 (261) | $30,525,268 | |
| Sex equity | School district (743) | $10,939 | $24,960 | $3,600 | $250-419,625 (163) | $8,131,965 | 1.39 |
| | Secondary AVS (228) | $15,694 | $17,606 | $8,120 | $350-75,000 (100) | $3,582,518 | |
| | Postsecondary institution (525) | $16,115 | $18,014 | $9,000 | $300-100,000 (192) | $8,453,100 | |
| Program improvement | School district (2660) | $27,453 | $112,997 | $9,887 | $97-3,823,031 (391) | $73,017,606 | 8.51*** |
| | Secondary AVS (408) | $58,163 | $173,357 | $25,000 | $1,500-2,000,000 (154) | $23,704,783 | |
| | Postsecondary institution (1010) | $104,344 | $250,767 | $50,000 | $1,217-1,500,000 (196) | $105,402,615 | |

*** p<.001

Handicapped Funds. Forty-nine percent of school districts nationally spent Perkins' handicapped funds. Among these districts. the average expenditure during 1986-87 was $11,398. However, the range is quite large, from $100 to $1.7 million. Half of all districts spent less than $3000 in Perkins' handicapped funds. The total amount of handicapped funds spent during 1986-87 was $58.4 million.

Among the 82% of secondary AVS spending funds, the average expenditure during the 1986-87 school year was $45,222, with a range from $640 to $2 million. The median expenditure was $16,929, with a total of $31.1 million.

Fifty-nine percent of postsecondary institutions spent handicapped funds. These institutions spent an average of $20,863 in Perkins' handicapped monies, with a median value of $11,137. The range of expenditures was from $424 to just under $250,000. The total amount of Perkins' handicapped funds expended by postsecondary institutions was $22 million.

The average amount of Perkins' funds spent by AVS for handicapped students is significantly higher than the average spent by either school districts or postsecondary institutions (Scheffe post hoc comparisons, $p < .05$). Indeed, the national estimate of the average expenditure of handicapped funds among AVS during 1986-87 ($45,222) is nearly four times the average reported by school districts ($11,398) and twice the amount spent by postsecondary institutions ($20,863). The median among AVS of nearly $17,000 is also substantially higher than among school districts, where half spent $3,000 or less. However, the range in handicapped funds spent by districts is close to that spent by AVS. The maximum expenditure reported by school districts was $1.7 million, compared with the maximum of $2 million among the AVS sample. These results suggest that while, on average, school districts received smaller handicapped allocations than AVS, a few districts did receive large awards.

Disadvantaged Funds. Half of all school districts spent Perkins' disadvantaged funds during 1986-87. Their average expenditures was $19,627, with a range from $100 to $2.9 million. Half of all districts spent less than $4000 in Perkins' funds for disadvantaged students. A total of $102 million in disadvantaged funds was spent by school districts during 1986-87.

Eighty-three percent of AVS spent Title IIA funds for disadvantaged students during 1986-87. Their average expenditure was $54,952, with the median at $27,418 and a range from $793 to $1 million. Secondary AVS spent a total of $37.7 million in disadvantaged funds.

Among the 59% of postsecondary institutions spending Perkins' funds for disadvantaged students, the average expenditure was $43,729 during 1986-87, with the median at $22,734. Expenditures ranged from $300 to $750,000, with a total of $49.7 million.

On average, the amount of Perkins' funds for disadvantaged students spent by school districts ($19,627) is less than half of that spent by AVS ($54,952) or postsecondary institutions ($43,729). These differences are both statistically significant (Scheffe post hoc comparison, $p < .05$). The median dollar amount spent by school districts is also smaller than the median associated with the other two types of vocational providers. However, the range in the amount of federal dollars spent by school districts is larger than is seen among AVS or postsecondary institutions.

Limited-English-Proficient (LEP) Funds. Only 7% of school districts spent LEP funds during 1986-87. Among this subset of districts, the average expenditure was $15,824, with a range from $25 to $1.8 million. However, since half of the districts spent less than $2,000, it appears that for most districts this grant is small. The total amount of LEP funds spent by districts was $10.2 million.

Sixteen percent of secondary AVS spent LEP funds during 1986-87. Among this group, the average expenditure was $11,895, with a range from $30 to $100,000. The total amount spent was $1.2 million, although half of the AVS spent $3000 or less.

There is not a statistically significant difference between districts and AVS in the average amount of LEP funds spent.

Adult Funds. Three percent of districts spent Perkins' adult funds. The average expenditure was $64,564, with a range from $27 to 1,520,157. Half of the districts spent $9,500 or less. The total amount of adult funds expended by districts in 1986-87 was $22.9 million.

Nearly 30% of AVS spent adult funds during 1986-87, with an average expenditure of $51,515 and a median of $29,718. The spending ranged from $1,160 to $368,635, with a total of $11.6 million.

Thirty-seven percent of postsecondary institutions spent Perkins' adult funds during 1986-87. Their average expenditure was $43,938, with a median of $26,000 and a range from $22 to $397,280. In total, postsecondary institutions spent $26.9 million in adult funds.

Although a small percentage of school districts spent Perkins' funds for adults in secondary programs, the average amount spent was similar to that spent by secondary AVS and postsecondary institutions. The difference between the $65,000 average among school districts and the $52,000 and $44,000 averages among secondary AVS and postsecondary institutions is not statistically significant.

An inspection of the medians in the three samples reveals that half of the school districts spent less than $10,000 for adults, compared with medians of more than $25,000 for secondary AVS and postsecondary institutions. Again, we see a wide range in funds spent by school districts--from $27 up to $1.5 million. These results suggest that although a few school districts received large grants for adults, most received small grants in this Perkins' category. In contrast, the largest amount spent for adults by AVS or post-secondary institutions was less than $400,000.

Single Parent/Homemaker Funds. Five percent of school districts spent Perkins' funds for single parents/homemakers in secondary programs during 1986-87. Their average expenditure was $21,108, with a range from $300 to $1.2 million. A total of $11.2 million in single parent funds was spent by districts, although half of all districts spent $8000 or less.

Nearly one third of AVS reported expenditures for single parents/ homemakers in 1986-87. The average expenditure was $35,121, with the median at $32,696. Spending ranged from $2500 to $113,229 and totaled nearly $8 million.

Single parent funds were spent by 47% of postsecondary institutions. The average expenditure was $36,952, with a range from $693 to $290,491. The median value was 32,696. Spending totaled $30.5 million.

The pattern of expenditures in this funding category by the three types of vocational providers is similar to adult funds. There is not a statistically significant difference among the average expenditures reported by the three types of providers, with the mean of each approximately $20,000-

$35,000. However, the range among school districts of $300 to $1.2 million is wider than for the other two types of providers. A few large values would inflate the mean. In contrast, the median value, which is not as sensitive to a few extreme values, is only $8,000 in the school districts, compared with more than $32,000 in the other two samples. Taken together, these results indicate that a few school districts received large grants for single parents/homemakers, but that the majority of districts received smaller awards than AVS or postsecondary institutions.

Sex Equity Funds. In the allocation of Perkins' Title IIA funds to states, programs to reduce sex bias in vocational education received the smallest proportion of funds (3.5%). This is reflected in the expenditures reported by local vocational providers.

Only 7% of school districts spent Perkins' sex equity funds in 1986-87. Spending averaged $10,939 and ranged from $250 to $419,625. Half of all districts spent $3600 or less, with the total across all districts at $8.1 million.

Nearly 30% of AVS spent Perkins' sex equity funds. Their average expenditure was $15,694, with the median at $8,120. Spending ranged from $350 to $75,000 and totaled $3.6 million.

Thirty percent of postsecondary institutions spent Perkins' sex equity funds, ranging from $300 to $100,000. The average expenditure was $16,115, although half of all institutions spent $9,000 or less. Spending totaled $8.5 million.

The average expenditure of sex equity funds among the three types of providers ranges from $10,000-$16,000 and is, on average, the smallest expenditure of the Perkins' categories investigated. In addition, half of all AVS and postsecondary institutions spent less than $10,000 in federal funds for sex equity programs; half of the school districts spent less than $4,000. There are no statistically significant differences among the three types of providers.

Program Improvement Funds. Twenty-six percent of school districts spent Perkins' funds for program improvement. Their spending averaged $27,453 and ranged from $97 to $3.8 million. Spending totaled $73 million, although half of all districts spent less than $10,000.

Approximately half of the AVS spent program improvement funds in 1986-87, ranging from $1,500 to $2 million. The average expenditure was $58,163, with the median at $25,000 and a total of $23.7 million.

Nearly 60% of postsecondary institutions spent program improvement funds. Their average expenditure was $104,344, with the median at $50,000 and a range from $1,217 to $1.5 million. Spending totaled $105.4 million.

Districts spent significantly less in program improvement funds than postsecondary institutions (Scheffe post hoc comparisons, $p < .05$). While the average expenditure by AVS was well below that of postsecondary institutions, given the wide range in expenditures and the large standard deviations in both samples, the average expenditures of the two types of providers are not significantly different on statistical tests.

Since postsecondary institutions generally have more students than secondary LEAs, it is important to look beyond the total dollar amounts to the expenditures for program improvement activities in relation to student enrollment. When program improvement expenditures are computed on a per pupil basis, the results indicate that secondary AVS and postsecondary institutions both spent significantly more than school districts (Scheffe post hoc comparison, $p < .05$). For postsecondary institutions, the program improvement expenditure divided by the total FTE enrollment yields an average national estimate of $54.71 in program improvement funds per pupil, with a median of $21.86, based on a weighted sample size of 943 institutions. For secondary AVS, the national estimate of the mean is $58.29, with the median at $22.50, based on a weighted sample size of 343 institutions. In contrast, the average per pupil program improvement expenditure by school districts was $33.23, with the median at $13.99, based on a weighted sample size of 2,525 districts.

Total Amount of Perkins' Funds Spent

To get a sense of the total amount of federal Perkins' dollars spent during 1986-87, local expenditures were summed across the individual categories of Title IIA and IIB funds. These results, presented in Exhibit 3.12, include only those districts and institutions that reported spending in at least one category of Perkins' funding. In this way, the weighted means reflect national estimates of the average total Perkins' expenditures across all districts and institutions receiving funds during 1986-87.

Exhibit 3.12

National Estimates of Total Perkins' Dollars Spent During 1986-87
by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions

| Type of District/ Institution (Weighted n) | Total Perkins' Funds Spent | | | | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|---|---|
| | Mean | Standard Deviation | Median | Range | Total | (Unweighted n) | |
| Secondary | | | | | | | |
| School district (6,735) | $42,460 | $249,491 | $7,910 | $100-13,301,747 | $285,957,916 | (681) | 22.52*** |
| Secondary AVS (771) | $151,463 | $368,741 | $91,309 | $500-5,100,000 | $116,818,851 | (257) | |
| Total (7,506) | $53,661 | $266,272 | $8,882 | $100-13,301,747 | $402,776,767 | (938) | |
| Postsecondary | | | | | | | |
| Community college (801) | $155,181 | $163,773 | $101,450 | $1,350-1,658,122 | $124,256,940 | (289) | 1.23 |
| Postsecondary AVS, technical institute or four-year college (640) | $185,468 | $326,848 | $79,000 | $9,000-2,467,509 | $118,678,497 | (91) | |
| Total (1,441) | $168,634 | $250,073 | $92,395 | $1,350-2,467,509 | $242,935,437 | (380) | |
| Total (8,947) | $72,174 | $267,082 | $12,000 | | $645,712,204 | (1318) | |

*** p<.001

Secondary Level. School districts spent an average of $42,460 in federal vocational funds during 1986-87, with a range from $100 to $13.3 million. However, half of all districts spent less than $8,000. District spending totaled nearly $286 million.

Secondary AVS spent an average of $249,491 in federal Perkins' dollars, with a median of $91,309. Spending ranged from $500 to $5.1 million, and totaled $116.8 million.

The average amount of Perkins' monies spent by AVS was significantly larger than the average spent by districts. However, of the $402.8 million in total Perkins' funds spent by secondary providers, school districts' total expenditures accounted for 71% and AVS accounted for 29%.

While the larger proportion of federal funds to school districts reflects student enrollments, the 2.5:1 ratio of spending is not commensurate with the ratio of students. As described in Chapter 2, school districts enrolled a total of 10.5 million secondary students in 1986-87. It is estimated that about 80% of all secondary students take at least one vocational course, or about 8.4 million students. We estimate that 1.3 million students are enrolled in secondary AVS. However, since this is a "head count" and most schools are not full-day, this figure should be reduced by about 60% to 800,000 students. Also, since students in part-day AVS are likely to be double-counted in total district enrollments, this figure should be subtracted from the district estimate of 8.4, yielding 7.6 million students.

With these two estimates of student enrollment, the ratio of enrollments in districts versus AVS is 9.5:1, much larger than the distribution of funds. Thus, it appears that AVS get a proportion of secondary funds greater than their share of students. Of course, since AVS tend to offer more technical courses, the cost of vocational equipment and facilities would be more expensive than in most school districts.

Postsecondary Level. Community colleges spent an average of $155,181 in Perkins' funds during 1986-87, with a range from $1,350 to $1.6 million. The median value was $101,450 and spending totaled $124.3 million.

Total Perkins' spending among other types of postsecondary institutions (e.g., technical institutes, four-year colleges) averaged $185,468, with

a range from $9,000 to $2.5 million. The median value was $79,000, with a total of $118.7 million.

The average amount of Perkins' funds spent by community colleges ($155,181) does not differ significantly from the average among other types of institutions ($185,468). In addition, of the $243 million total spent at the postsecondary level, there was a fairly even split among spending by community colleges (51%) and other institutions (49%). The estimated FTE enrollment in community colleges (3.7 million) is 1.5 times larger than FTE enrollments in other types of postsecondary institutions (2.3 million). Thus, the percentage of total Perkins' funds spent by community colleges is slightly less than the proportion of students served by those institutions.

Secondary-Postsecondary Split. An estimated total of $645.7 million dollars in Perkins' funds was spent in 1986-87. Of that amount, 62% ($402.7 million) was spent by secondary providers and 38% by postsecondary institutions ($242.9 million). This ratio is similar to the ratio of enrollments at the secondary level (11.7 million students) and postsecondary level (5.9 million FTE). Although the enrollment estimates reflect total enrollments more than vocational enrollments, the secondary-postsecondary split of Perkins' funds is not out of line with the total number of students served by schools at the two levels.

## Percentage of Districts and Institutions Not Spending Any Perkins' Funds

The total Perkins' dollars reported in Exhibit 3.12 exclude vocational providers that reported no Perkins' expenditures during 1986-87. However, the cases spending no Perkins' funds in any category constitute an interesting group to explore further. These cases with zero Perkins' funds include only those respondents who checked that they spent no funds in each category of the Title IIA and IIB funds; respondents who left any of these questions blank were assigned a missing value, not zero, for total Perkins' expenditures.

Exhibit 3.13 displays the percentage of each type of vocational provider reporting no Perkins' funds spent in any category. (These percentages are the reciprocal of the percentages reported in Exhibits 3.2 and 3.3.) The percentage of school districts nationwide that did not spend any federal dollars for vocational education is estimated to be 38%. Nine percent

Exhibit 3.13

National Estimates of Percentage of School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions Reporting No Perkins' Funds Spent During 1986-87

| Type of District/ Institution | Percent Reporting No Perkins' Funds Spent | $X^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|
| Secondary | | |
| School district[a] | 37.5 | 75.66*** (.27) |
| Secondary AVS[b] | 9.2 | |
| Postsecondary | | |
| Community college[c] | 15.2 | 7.15** (.14) |
| Postsecondary AVS, technical institute or four-year college[d] | 26.1 | |

[a]Weighted n = 10,772; unweighted n = 808
[b]Weighted n = 849; unweighted n = 275
[c]Weighted n = 944; unweighted n = 308
[d]Weighted n = 866; unweighted n = 112

** $p<.01$
*** $p<.001$

of secondary AVS did not spend any Perkins' funds during 1986-87, a figure significantly lower than among school districts. As the postsecondary level, significantly fewer community colleges (15%) than other types of institutions (26%) did not spend any Perkins' funds.

Enrollments in Districts and Institutions Not Spending Perkins' Funds

Exhibit 3.14 presents a comparison of the average student enrollment among vocational providers that spent some versus no Perkins' funds in 1986-87. Due to small sample sizes, all types of postsecondary institutions were combined in this analysis. These results indicate that school districts and postsecondary institutions that did not spend money in any category of Title IIA or IIB funds are significantly smaller than those spending funds. For example, the average student enrollment among school districts that spent Perkins' funds was 1284, compared with 411 students in districts spending no Perkins' funds. This finding is consistent with the primary reason given by school districts for not receiving funds: that the likely award was too small to justify the application process.

The secondary AVS that did not spend Perkins' funds during 1986-87 did not have smaller student enrollments than AVS spending federal dollars (1,731 versus 1,579 students). Again, looking at the reasons why AVS did not receive Title IIA and IIB funds, the most prevalent reason related to eligibility requirements. If state policies preclude some AVS from directly receiving federal dollars, then we would expect state differences to be more important than school size.

Exhibit 3.15 shows the total number of students in districts and institutions that did not spend any Perkins' funds in 1986-87. Each enrollment figure was divided by the total enrollment to yield the percentage of students in districts and institutions without federal vocational monies.

For handicapped and disadvantaged funds, approximately one quarter of secondary students attend school districts that did not spend any Perkins' funds. Only 13-14% of students attending AVS did not have access to programs funded by Perkins' money. Half of all students attending postsecondary institutions with vocational programs were in institutions that did not spend Perkins' handicapped funds; 33% of students did not have access to programs funded by Perkins' disadvantaged monies.

Exhibit 3.14

National Estimates of Student Enrollments in Districts and Institutions Spending and Not Spending Any Perkins' Funds During 1986-87

| Type of District/Institution | Average Student Enrollment: Spent Some Perkins' Funds (Unweighted n) | Average Student Enrollment: Spent No Perkins' Funds (Unweighted n) | t-test of Group Differences |
|---|---|---|---|
| School district[a] | 1284 (641) | 411 (123) | 4.08*** |
| Secondary area vocational school[b] | 1731 (218) | 1579 (14) | 0.31 |
| Postsecondary institution[c] | 4004 (349) | 1862 (38) | 3.39** |

[a] Weighted total n = 10,404
[b] Weighted total n = 722
[c] Weighted total n = 1,652

** p<.01
*** p<.001

Exhibit 3.15

**Percentage of Students in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions Not Spending Perkins' Funds During 1986-87**

| Category of Funds | Type of District/ Institution | Total Number of Students | % of Total Enrollment |
|---|---|---|---|
| Handicapped | School district | 2,490,470 | 23.8 |
| | Secondary AVS | 167,907 | 12.8 |
| | Postsecondary | 2,970,149 | 49.9 |
| Disadvantaged | School district | 2,717,553 | 26.0 |
| | Secondary AVS | 179,110 | 13.6 |
| | Postsecondary | 1,955,711 | 32.9 |
| Limited-English-proficient | School district | 7,664,670 | 73.2 |
| | Secondary AVS | 855,525 | 65.2 |
| Adult | School district | 8,038,018 | 76.8 |
| | Secondary AVS | 668,783 | 51.0 |
| | Postsecondary | 2,804,717 | 47.1 |
| Sex equity | School district | 7,306,423 | 69.8 |
| | Secondary AVS | 713,137 | 54.3 |
| | Postsecondary | 3,857,914 | 64.8 |
| Single parent | School district | 7,905,452 | 75.5 |
| | Secondary AVS | 700,919 | 53.4 |
| | Postsecondary | 2,618,830 | 44.0 |
| Program improvement | School district | 4,855,607 | 46.4 |
| | Secondary AVS | 499,358 | 38.1 |
| | Postsecondary | 1,158,272 | 19.5 |
| Total Perkins | School district | 1,619,184 | 15.5 |
| | Secondary AVS | 92,207 | 7.0 |
| | Postsecondary | 672,866 | 11.3 |

Approximately 65-75% of secondary students attended district high schools or AVS that did not spend Perkins' LEP funds. Similarly, 70-75% of students enrolled in district high schools and approximately half of students in AVS did not have access to programs funded by Perkins' adult, sex equity or single parent/homemaker funds. Approximately 45-50% of postsecondary students attended institutions without adult or single parent/homemaker funds, and 65% attended institutions without Perkins' sex equity monies.

Nearly half of all secondary students (46%) attended districts that did not expend Perkins' program improvement funds in 1986-87. A slightly smaller percentage (38%) of students at AVS did not have access to federally-funded program improvement projects. In contrast, only 20% of postsecondary students were enrolled in institutions without Perkins' program improvement funds.

When total Perkins' Title IIA and IIB expenditures are considered, only 16% of students were enrolled in districts without these federal funds. These results indicate that although 38% of districts spent no Perkins' monies during 1986-87, these districts represent only 16% of all students. The 9% of AVS that spent no Perkins' funds represent only 7% of students attending secondary area vocational schools. At the postsecondary level, the 20% of institutions offering vocational programs that reported no Perkins' expenditures represent 11% of postsecondary students.

Total Perkins' Funds Spent Per Pupil

Since earlier analyses have shown that school districts tend to have fewer students than secondary AVS or postsecondary institutions, it is important to consider the total Perkins' expenditures in relation to enrollment figures. Exhibit 3.16 summarizes the total Perkins' expenditures per pupil. Only districts and institutions spending Perkins' funds are included in this analysis.

These data show that, on average, secondary AVS spent significantly more per student than districts or postsecondary institutions. For example, secondary AVS spent $143 per student, while postsecondary institutions spent an average of $128 per student. In contrast, school districts spent only $43 in Perkins' funds per student. The median per pupil expenditure for school districts ($20) also is considerably lower than that of postsecondary institu-

Exhibit 3.16

National Estimates of Total Perkins' Dollars Spent Per Pupil During 1986-87
in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions

| Type of District/ Institution (Weighted n) | Total Perkins' Funds Per Pupil | | | | | F Statistic of Differences among Group Means |
|---|---|---|---|---|---|---|
| | Mean | Standard Deviation | Median | Range | (Unweighted n) | |
| School district (6468) | $42.56 | $91.52 | $20.23 | $0.32-925.87 | (641) | 55.16*** |
| Secondary area vocational schools (664) | $143.28 | $166.68 | $86.47 | $0.94-1527.11 | (218) | |
| Postsecondary institutions (1291) | $128.39 | $173.22 | $72.08 | $0.32-1070.15 | (349) | |



*** p <.001

tions ($72) and secondary AVS ($86). Of course, as noted earlier, the types of courses offered in AVS versus districts necessitate different costs. In addition, the per pupil costs for school districts and postsecondary institutions are based on all students, not just vocational students. However, since nearly 80% of all high school students take some vocational education, the difference in the enrollment statistic would not entirely explain the difference in per pupil expenditures.

Percent of District or Institution Budget

The secondary survey asked respondents for the total vocational budget, including federal, state and local monies used to support vocational education. It is clear from some responses that the budget figures reported did not include federal sources, since the budget was less than the total Perkins' funds spent. In these cases, the budget amount was set to missing. In addition, based on written comments on the survey, the inclusion of staff salaries in this budget figure was not consistent across respondents. Thus, the total budget figure should be viewed as a gross approximation of vocational budgets.

These caveats aside, the results suggest that federal vocational dollars are a small percentage of secondary vocational budgets. Among school districts, Perkins' dollars account for 11% of vocational budgets, on average. Among area vocational schools, Perkins' dollars represent only 6% of vocational budgets. Of course the "vocational" budget at an AVS would be equivalent to the total school budget, and would include indirect costs, overhead, maintenance, and the like. In contrast, the "vocational" budget in a district would refer only to salaries and materials in vocational programs and exclude general operating costs.

The postsecondary survey asked respondents for the amount of the total institution budget. Since vocational programs are scattered across departments, it was not considered feasible to inquire about vocational budgets. However, since the total institution budget is likely to be a known entity, these figures probably are more accurate than those for the secondary vocational budget. Averaged across respondents, Perkins' funds account for 2.5% of postsecondary budgets.

Taken together, these results suggest that federal vocational dollars constitute a small proportion of funds available for local vocational programs and services. Although the size of some grants is appreciable, these larger grants go to bigger institutions or districts, and still represent a small proportion of vocational monies.

### 3.4 Perkins' Funds Carried Over or Returned to the State

States differ in the regulations regarding the distribution and expenditure of Perkins' funds. In some states, LEAs and postsecondary institutions are reimbursed with Perkins' dollars for local vocational expenditures. In this way, programs that start late or come in below anticipated budgets are reimbursed only for actual costs. In other states, LEAs and postsecondary institutions receive their Perkins' allocation up front, and unspent funds are returned to the state at the end of the fiscal year. Similarly, states have varying policies about the legality of carrying funds over from one fiscal year to the next.

In this study, we were interested in the extent to which LEAs and postsecondary institutions returned or could not spend federal vocational dollars for handicapped and disadvantaged students because of the matching and excess cost requirements. Thus, on the secondary and postsecondary surveys respondents were asked about (a) the amount of handicapped and disadvantaged funds returned to the state in 1986-87; (b) the amount carried over into 1987-88; and (c) the reasons for not spending these Title IIA funds.

#### Amount Carried Over or Returned to the State

Exhibit 3.17 summarizes the amount of handicapped and disadvantaged funds carried over and returned to the state. Since the responses are confounded by state-to-state differences, statistical tests of differences among districts and institutions were not computed.

On average, less than $1,000 of Perkins' funds for handicapped students was carried over or returned during 1986-87 across the three types of vocational providers. Fewer than 10% of respondents reported handicapped funds carried over; 13-20% reported returning handicapped funds to the state. On average, secondary AVS reported a greater amount of funds carried over or returned than school districts or postsecondary institutions.

Exhibit 3.17

National Estimates of Handicapped and Disadvantaged Funds
Carried Over into 1987-88 and Returned to the State in 1986-87

| Perkins' Funds | Type of District/ Institution | (Weighted n) | Amount of Funds: Mean | Amount of Funds: Standard Deviation | Amount of Funds: (Unweighted n) | % Returning or Carrying Over Funds | Median % of Spending |
|---|---|---|---|---|---|---|---|
| Handicapped | | | | | | | |
| Carried over into 1987-88 | School district | (6117) | $586 | $7,226 | (631) | 8.6 | 50.3 |
| | Secondary AVS | (708) | $888 | $4,846 | (240) | 7.0 | 75.0 |
| | Postsecondary institution | (1086) | $222 | $1,786 | (312) | 6.3 | 15.8 |
| Returned to the state in 1986-87 | School district | (6255) | $532 | $5,013 | (641) | 13.3 | 25.7 |
| | Secondary AVS | (722) | $1,006 | $3,002 | (243) | 20.0 | 8.6 |
| | Postsecondary institution | (1098) | $971 | $4,219 | (316) | 18.9 | 23.1 |
| Disadvantaged | | | | | | | |
| Carried over into 1987-88 | School district | (6220) | $1,112 | $15,802 | (621) | 8.5 | 79.5 |
| | Secondary AVS | (709) | $2,211 | $14,710 | (237) | 7.5 | 6.1 |
| | Postsecondary institution | (1153) | $655 | $3,460 | (335) | 7.5 | 28.6 |
| Returned to the state in 1986-87 | School district | (6362) | $985 | $10,513 | (633) | 13.2 | 25.7 |
| | Secondary AVS | (725) | $1,144 | $3,692 | (242) | 18.4 | 14.8 |
| | Postsecondary institution | (1154) | $1,095 | $4,977 | (336) | 18.4 | 12.2 |

However, from earlier analyses, we know that they also tended to receive larger grants.

To get a sense of the relative amount of funds carried over and returned, the dollar amounts carried over and returned were each divided by the amount of handicapped or disadvantaged funds spent. A few respondents returned more than they spent, due to a district spending freeze or other unusual circumstance described on the survey. Thus, Exhibit 3.17 presents the median, rather than the mean, proportion of funds carried over to the next fiscal year or returned to the state.

Of the small group of respondents carrying funds over, the median proportion carried over was 50% of handicapped funds spent in districts, 75% in AVS and 16% in postsecondary institutions. The median proportion of handicapped funds returned to the state was 26% among districts, 9% among AVS and 23% among postsecondary institutions.

Similar results are seen with funds for disadvantaged students. Only 8-9% of respondents carried over disadvantaged funds, with the average amount $1,000-$2,000 across the three providers. More respondents indicated that they returned disadvantaged funds to the state (13-18%), although the amount averaged only about $1,000.

The median proportion of disadvantaged funds carried over was 80% among districts, 6% among AVS and 29% among postsecondary institutions. The median proportion of disadvantaged funds returned was 26% among districts, 15% among AVS and 12% among postsecondary institutions.

Reasons for Unspent Funds

Exhibit 3.18 displays the reasons given by districts and institutions that returned or carried over handicapped and disadvantaged funds in 1986-87. This analysis includes only the small proportion of respondents that returned or carried over these funds.

The reason for unspent funds cited most often by secondary AVS and postsecondary institutions was that actual costs were lower than projected costs. When actual costs are less, the excess costs are less, so that the full federal allocation cannot be utilized. Nearly half of AVS and postsecondary institutions selected this reason to explain unspent handicapped

Exhibit 3.18

Reasons for Unspent Handicapped and Disadvantaged Funds in School Districts, Secondary Area Vocational Schools and Postsecondary Institutions

| Category of Perkins' Funds | Reason for Unspent Funds | Percent of District/Institution: School District | Secondary AVS | Postsecondary Institution | $x^2$ of Group Differences (Measure of Association) | |
|---|---|---|---|---|---|---|
| Handicapped | Program did not start on time | 7.2 | 11.5 | 18.2 | 4.18 | (.14) |
| | Underenrollment of students | 1.3 | 1.5 | 14.9 | 14.90*** | (.27) |
| | Too difficult to show excess costs | 33.5 | 16.0 | 13.9 | 9.69** | (.22) |
| | Matching funds not available | 19.1 | 14.6 | 10.5 | 2.03 | (.10) |
| | Unsure whether match available | 10.2 | 0.0 | 0.0 | 12.53** | (.25) |
| | Actual costs lower than budget | 25.5 | 46.4 | 47.7 | 9.50** | (.22) |
| | WEIGHTED TOTAL N | 1111 | 171 | 270 | | |
| | UNWEIGHTED TOTAL N | 148 | 46 | 80 | | |
| Disadvantaged | Program did not start on time | 7.9 | 12.5 | 23.9 | 8.07* | (.20) |
| | Underenrollment of students | 8.1 | 7.7 | 5.5 | 0.44 | (.05) |
| | Too difficult to show excess costs | 32.7 | 8.5 | 8.3 | 20.17*** | (.31) |
| | Matching funds not available | 21.7 | 8.5 | 10.2 | 6.24* | (.17) |
| | Unsure whether match available | 11.4 | 0.0 | 0.0 | 14.96*** | (.27) |
| | Actual costs lower than budget | 23.4 | 35.8 | 34.8 | 3.22 | (.12) |
| | WEIGHTED TOTAL N | 1153 | 176 | 295 | | |
| | UNWEIGHTED TOTAL N | 155 | 50 | 89 | | |

* $p<.05$
** $p<.01$
*** $p<.001$

funds, and approximately 40% attributed unspent disadvantaged funds to lower than expected costs. In contrast, only 23-26% of school districts returned or carried over these Title IIA funds because of lower costs.

In school districts, difficulty finding matching funds and demonstrating excess costs appear to be key reasons behind unspent federal dollars. More than one third of districts indicated that it was too difficult to demonstrate excess costs for handicapped students, which is more than double the percentage of AVS and postsecondary institutions citing this reason. One third of districts indicated that excess costs also were related to not spending Perkins' funds for disadvantaged students, compared with 9% of AVS and 8% of postsecondary institutions.

These results, compared with the reasons for not receiving Perkins' funds, suggest that demonstrating excess costs is somewhat difficult for secondary LEAs. Secondary AVS indicated this as a reason for not applying for Perkins' funds; school districts cited this as a reason for returning or carrying over Title IIA funds for handicapped and disadvantaged students.

### 3.5 Summary and Conclusions

This section summarizes the survey results about the amount of Perkins' dollars spent during 1986-87 and the types of districts, secondary AVS and postsecondary institutions spending these funds. Additional information and tabular displays can be found in the earlier sections of this chapter.

- **A greater proportion of secondary AVS than school districts spent Perkins' funds in 1986-87.**

More than 80% of secondary AVS spent Perkins' funds for handicapped and disadvantaged students, as compared with approximately half of school districts. Approximately 30% of AVS spent Perkins' funds for adults, single parents/ homemakers or sex equity, compared with less than 10% of districts. Half of the AVS spent Perkins' funds for program improvement, while only 26% of districts spent these federal dollars.

- **At the postsecondary level, community colleges were more likely to spend Perkins' funds than postsecondary AVS, technical institutes or four-year colleges offering vocational programs.**

Approximately 70% of community colleges spent Perkins' handicapped, disadvantaged or program improvement funds, compared with about half of other types of postsecondary institutions. Approximately 60% of community colleges spent single parent/homemaker funds, while only 34% of other postsecondary institutions reported spending these federal dollars.

- **An equal proportion of secondary and postsecondary providers spent Perkins' funds for handicapped and disadvantaged students. As would be expected, more postsecondary institutions spent funds for adults and single parents/homemakers. However, a larger proportion of postsecondary institutions spent Perkins' funds for sex equity and program improvement.**

Approximately 60% of secondary and postsecondary providers reported spending Title IIA funds for handicapped and disadvantaged students. However, 30% of postsecondary institutions spent Perkins' sex equity funds, compared with 13% of secondary LEAs; nearly 60% of postsecondary institutions spent Perkins' program improvement funds, compared with only 32% of secondary providers.

- **Postsecondary institutions that did not receive Perkins' funds were more likely than secondary providers to indicate that they did not know about the program. The majority of school districts that did not recieve funding indicated that they did not apply because the likely awards were too small.**

More than half of the postsecondary institutions that did not receive funds indicated that they did not know about Perkins' funds for handicapped and disadvantaged students or about program improvement monies. In school districts, 50-60% of respondents indicated that the most important reason why they did not apply for Perkins' funds was because the grants would be too small. In contrast, only 20-30% of AVS and postsecondary institutions indicated that they did not apply for funds because of the size of the award.

- **School districts that did not spend Perkins' funds generally have smaller enrollments than districts spending these federal dollars.**

These differences were seen for handicapped, disadvantaged and LEP funds as well as for sex equity and program improvement monies.

- **School districts spending Perkins' funds were more likely to be in urban areas than in rural or suburban areas.**

Nearly all urban districts spent handicapped and disadvantaged funds, compared with about half of suburban and rural districts. Fifty-six percent of urban districts spent Perkins' program improvement money, compared with 29% of suburban and 23% of rural districts.

- **Districts spending Perkins' funds had a higher proportion of nonwhites than districts without these federal vocational funds. However, the percentage of students below the poverty level was not related to spending Perkins' funds.**

The percentage of nonwhites was significantly higher for districts spending each category of Perkins' funds. The largest differerence was seen for LEP funds, where districts spending Perkins' LEP funds averaged 29% nonwhite, compared with only 11% nonwhite among districts not spending these funds.

- **The amount of Perkins' Title IIA and IIB funds spent by the average secondary AVS was significantly larger than the total expenditure by the average school districts. However, since there are so many more school districts than AVS nationally, school districts accounted for 71% and AVS 29% of the total Perkins' spending by secondary providers.**

Across categories of Title IIA and IIB funds, expenditures of Perkins' funds by secondary providers totaled $402.8 million in 1986-87. Districts spent 71% of these funds, or 2.5 times the total spent by AVS. Since the total student enrollments among districts is nearly ten times that of AVS, these results indicate that AVS received a proportion of Perkins' funding greater than their share of students. However, since AVS offer more technical courses than districts, their vocational costs would tend to be higher than in most districts.

- **The total Perkins' expenditure at the postsecondary level was nearly evenly divided between community colleges and other types of postsecondary institutions, although community colleges have nearly 1.5 times more students.**

Community colleges spent a total of $131,571 in 1986-87, compared with $136,983 spent by postsecondary AVS, technical institutes and four-year colleges. However, the estimated FTE enrollments at community colleges was 3.7 million students, compared with 2.3 million at other types of post-

secondary institutions. These results suggest that community colleges received a proportion of Perkins' funding that was not commensurate with their share of students.

- **An estimated total of $645.7 million dollars in Perkins' funds was spent in 1986-87. Of that amount, 62% was spent by secondary providers and 38% by postsecondary institutions.**

Secondary AVS and school districts enrolled an estimated 11.7 million students in 1986-87, while postsecondary institutions offering vocational programs enrolled nearly 6 million students FTE. Thus, this ratio of funds spent is in line with the proportion of students served by each education level.

- **AVS spent significantly more, on average, in total Perkins' dollars per student than either school districts or postsecondary institutions.**

Secondary AVS spent an average of $143 per student, while postsecondary institutions spent an average of $128 per student. On average, districts spent only $43 per student. The median per student value also is higher for AVS ($87) than for postsecondary institutions ($72) or districts ($20).

- **Thirty-eight percent of school districts and 9% of AVS did not spend any Perkins' Title IIA or Title IIB funds in 1986-87. At the postsecondary level, 20% of institutions offering vocational education did not spend any Perkins' funds.**

Although 38% of districts reported no Perkins' funds in 1986-87, these districts enrolled only 16% of all secondary students attending district high schools. The 9% of AVS without Perkins' funds represent only 7% of students attending secondary area vocational schools. Similarly, only 11% of postsecondary students were enrolled in institutions that did not spend any Perkins' funds.

## 4.0 HOW PERKINS' FUNDS ARE SPENT BY DISTRICTS AND INSTITUTIONS

### 4.1 Introduction

In this chapter, we describe how school districts, secondary area vocational schools and postsecondary institutions spent Perkins' funds during 1986-87. While the Perkins Act provided broad guidelines for the use of Title IIA funds, the law tended to spell out the goals of each allotment rather than specify particular activities. For example, the legislation indicated that states could use handicapped funds for "staff, equipment, materials and services . . . that are essential for handicapped individuals to participate in vocational education." Funds for disadvantaged students were intended to improve vocational education services and activities and to promote equal access of disadvantaged individuals to quality vocational education.

The law enumerates twenty-four possible expenditures of Title IIB funds for program improvement. These funds were to be used to expand or initiate exemplary programs and services, not to maintain funding of existing programs. The list of acceptable activities includes: expanding career counseling and guidance; curriculum development in vocational education; placement services for students successfully completing vocational programs; inservice training to increase the competence of vocational education teachers, counselors and administrators; and the acquisition of high-technology equipment for vocational education programs.

Finding out how these federal dollars were spent at the local level was one of the prime objectives of the survey. While districts and institutions report to state agencies on Perkins' expenditures, these figures reflect standard budget categories. Instead, we were interested in describing the use of federal vocational funds in terms of educational programs and services, to be able to discuss the types of activities that federal vocational dollars support. Thus, we asked respondents to estimate the percentage of Perkins' funds spent in various activities such as curriculum development, basic skills instruction and student recruitment.

In the following sections, we present the proportional allocation of Perkins' funds by local providers. The data displays summarize the ways in which each of the Title IIA and IIB funds were spent during 1986-87 in school districts, secondary AVS and postsecondary institutions. In addition, we

describe the extent to which various categories of Perkins' funds were combined in postsecondary institutions.

## 4.2 Percentage Distribution of Perkins' Funds

Survey respondents were asked to estimate the percentage of funds spent on a specified set of activities and programs. The list included eight to ten categories of allowable costs based on the guidelines contained in the legislation. These included activities and services such as basic skills instruction; salaries for classroom aides; guidance, assessment or counseling; child care services; job placement services; and equipment. In addition, we provided an "other" category for respondents to add to our pre-set response options.

The total percentage of funds, including "other", was to add to 100% of funds spent. In the few cases where respondents mistakenly listed percentages that totaled more than 110% or less than 90%, responses for that category of Perkins' funding were set to missing.

After our first look at the data, it was apparent that as much as 10% of funds were listed in the "other" category. In order to capture fully the ways in which Perkins' funds were spent, we went back through all surveys that specified an "other" category and created three or four new classifications. Through this process, we added categories for materials and supplies, administration/overhead, instructional support staff (e.g., tutors, resource teachers) and tuition reimbursement.

When interpreting the survey results, it is important to recognize the shortcomings of coding open-ended responses post hoc. First, since these response categories were not listed on the survey, respondents wrote in their own categories. Some respondents used ambiguous terminology in specifying the "other" expenditures, which could not be categorized in the recoding process. Second, we printed only one line for "other", and many respondents combined several activities into this one category. In these cases, when we could not disaggregate the percentages, they remained as "other". For these reasons, the percentage of funds reported in these recoded categories are probably underestimates of actual expenditures. The categories coded post hoc are identified on all of the data displays in this chapter. The percentages reported should be considered illustrative of "other" spending categories, but not reliable data.

Handicapped Funds

In school districts, an average of 24% of handicapped funds was spent on guidance, assessment or counseling services (Exhibit 4.1). Approximately 20% of funds paid for paraprofessionals or aides for vocational classrooms, and nearly 20% was spent on modified or new equipment.

Among secondary AVS, an average of 36% of handicapped funds paid for paraprofessionals or aides in vocational classes. Nearly 20% of handicapped funds supported salaries of teachers for separate classes.

Postsecondary institutions spent an average of 24% of their handicapped funds on guidance, assessment and counseling, and another 23% on paraprofessionals or aides in vocational classes. In addition, 18% of handicapped funds, on average, was used for new or modified equipment.

In school districts and postsecondary institutions, a significantly higher proportion of Perkins' funds for handicapped students (24%) was spent on guidance, assessment or counseling services than was the case among secondary AVS, which spent an average of 13% on these services. However, since most AVS are not full-day programs, these guidance and assessment services may take place at the comprehensive high school in the sending district.

At the AVS, a significantly larger proportion of handicapped funds (36%) was spent for paraprofessionals or classroom aides than was the case in school districts (20%) or postsecondary institutions (23%). AVS also used a higher proportion of funds to pay for teachers in separate classes (19%) than did districts (13%) or postsecondary institutions (12%).

On average, a higher proportion of funds was spent on paraprofessionals or classroom aides in regular vocational classrooms than on staff for separate classrooms. For example, in AVS, 36% of funds paid for paraprofessionals, while 19% paid salaries for staff in separate classrooms. In addition, a large proportion of funds were spent on guidance and counseling, particularly in school districts and postsecondary institutions. Taken together, these results suggest that Perkins' funds for handicapped students were more likely to be used to support the special needs of handicapped students in regular or mainstreamed vocational classes than for separate classes.

Exhibit 4.1

National Estimates of How Handicapped Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Paraprofessionals/aides in regular vocational classes | School districts[a] | 19.6 | 35.3 | 0.0 | 15.47*** |
| | Secondary AVS[b] | 35.9 | 35.8 | 26.0 | |
| | Postsecondary institutions[c] | 23.3 | 33.3 | 0.0 | |
| Teachers or staff for separate vocational classes | School districts | 13.1 | 28.9 | 0.0 | 3.99* |
| | Secondary AVS | 18.7 | 31.0 | 0.0 | |
| | Postsecondary institutions | 11.6 | 26.3 | 0.0 | |
| Modified or new equipment | School districts | 18.8 | 33.3 | 0.0 | 2.15 |
| | Secondary AVS | 13.5 | 24.5 | 0.0 | |
| | Postsecondary institutions | 17.9 | 30.6 | 0.0 | |
| Consultation services | School districts | 4.3 | 14.0 | 0.0 | 3.92* |
| | Secondary AVS | 1.4 | 4.9 | 0.0 | |
| | Postsecondary institutions | 3.6 | 14.1 | 0.0 | |
| Guidance, assessment or counseling | School districts | 23.5 | 33.9 | 5.0 | 10.78*** |
| | Secondary AVS | 12.6 | 22.3 | 0.0 | |
| | Postsecondary institutions | 24.2 | 32.6 | 10.0 | |
| Development or modification of vocational curriculum | School districts | 7.1 | 19.5 | 0.0 | 2.93 |
| | Secondary AVS | 4.7 | 9.8 | 0.0 | |
| | Postsecondary institutions | 4.3 | 12.2 | 0.0 | |
| Job placement services | School districts | 2.6 | 10.6 | 0.0 | 0.66 |
| | Secondary AVS | 3.6 | 10.0 | 0.0 | |
| | Postsecondary institutions | 2.8 | 10.4 | 0.0 | |



(continued)

Exhibit 4.1
(continued)

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Materials and supplies[d] | School districts | 4.3 | 18.1 | 0.0 | 4.31* |
| | Secondary AVS | 4.2 | 14.4 | 0.0 | |
| | Postsecondary institutions | 1.1 | 5.5 | 0.0 | |
| Administration/overhead[d] | School districts | 0.1 | 0.8 | 0.0 | 2.71 |
| | Secondary AVS | 0.2 | 3.1 | 0.0 | |
| | Postsecondary institutions | 1.0 | 4.3 | 0.0 | |
| Instructional support staff[d] | School districts | 1.1 | 9.5 | 0.0 | 10.92*** |
| | Secondary AVS | 3.2 | 14.3 | 0.0 | |
| | Postsecondary institutions | 7.2 | 23.0 | 0.0 | |

[a]Weighted n = 5033; unweighted n = 583
[b]Weighted n = 689; unweighted n = 234
[c]Weighted n = 1055; unweighted n = 304
[d]Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

* $p < .05$
** $p < .01$
*** $p < .001$

Disadvantaged Funds

School districts spent an average of 22% of their Perkins' funds for disadvantaged students on guidance, assessment and counseling services (Exhibit 4.2). Another 17% of funds, on average, paid for paraprofessionals or aides in regular vocational classes, and 15% were towards equipment.

Secondary AVS spent an average of 33% of their Perkins' funds on paraprofessionals or aides within the regular vocational classroom. AVS used an average of 18% of disadvantaged funds to pay teachers or staff for separate classes. In addition, 13% of disadvantaged funds supported basic skills instruction in nonvocational classes.

Postsecondary institutions spent an average of 21% of Perkins' funds for disadvantaged students on paraprofessionals or aides in vocational classes and another 20% on guidance, assessment or counseling services. In addition, they used an average of 17% of disadvantaged funds for basic skills instruction in nonvocational classes and 13% for equipment.

Secondary AVS spent a higher percentage of Perkins' disadvantaged monies than districts or postsecondary institutions to help disadvantaged students in the regular vocational classroom. For example, AVS reported an average of 33% of disadvantaged funds to pay for paraprofessionals or aides, as compared with 17% by districts and 21% by postsecondary institutions.

Secondary AVS also spent a larger proportion of disadvantaged funds (13%) for basic skills instruction in nonvocational classes than districts (6%), a statistically significantly difference. However, it is important to recognize that these differences do not necessarily indicate that school districts do not offer or do not need to offer basic skills instruction to their vocational students. The survey results merely suggest that they were less likely to use Perkins' funds for this purpose. Since these high schools within school districts serve both vocational and nonvocational students, they might be providing the same intensity of service with other education funds.

Limited-English-Proficient (LEP) Funds

The secondary AVS and school districts that received Perkins' funds for LEP students spent these monies in generally the same way. The summary of

Exhibit 4.2

National Estimates of How Disadvantaged Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Paraprofessionals/aides in regular vocational classes | School districts[a] | 16.6 | 32.4 | 0.0 | 17.71*** |
| | Secondary AVS[b] | 32.9 | 35.2 | 20.0 | |
| | Postsecondary institutions[c] | 20.5 | 31.3 | 0.0 | |
| Teachers or staff for separate vocational classes | School districts | 12.9 | 27.6 | 0.0 | 4.34* |
| | Secondary AVS | 18.3 | 31.3 | 0.0 | |
| | Postsecondary institutions | 11.2 | 24.3 | 0.0 | |
| Basic skills instruction in nonvocational classes | School districts | 6.3 | 18.7 | 0.0 | 16.10*** |
| | Secondary AVS | 13.4 | 28.0 | 0.0 | |
| | Postsecondary institutions | 17.2 | 29.5 | 0.0 | |
| Guidance, assessment or counseling | School districts | 21.5 | 32.6 | 5.0 | 11.19*** |
| | Secondary AVS | 10.7 | 21.3 | 0.0 | |
| | Postsecondary institutions | 20.2 | 25.5 | 10.0 | |
| Equipment | School districts | 15.3 | 29.6 | 0.0 | 7.16*** |
| | Secondary AVS | 7.2 | 16.7 | 0.0 | |
| | Postsecondary institutions | 12.9 | 25.3 | 0.0 | |
| Development or modification of vocational curriculum | School districts | 7.6 | 21.6 | 0.0 | 7.30*** |
| | Secondary AVS | 4.1 | 10.7 | 0.0 | |
| | Postsecondary institutions | 3.0 | 8.3 | 0.0 | |
| Stipends or subsidized employment | School districts | 5.3 | 20.9 | 0.0 | 8.39*** |
| | Secondary AVS | 1.5 | 10.2 | 0.0 | |
| | Postsecondary institutions | 0.8 | 4.8 | 0.0 | |
| Recruitment of out-of-school youth | School districts | 0.2 | 1.9 | 0.0 | 6.80** |
| | Secondary AVS | 0.3 | 1.9 | 0.0 | |
| | Postsecondary institutions | 1.1 | 5.5 | 0.0 | |



(continued)

Exhibit 4.2
(continued)

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Employability and job search activities | School districts | 3.7 | 14.2 | 0.0 | 2.08 |
| | Secondary AVS | 2.6 | 9.4 | 0.0 | |
| | Postsecondary institutions | 1.8 | 7.5 | 0.0 | |
| Child care services | School districts | 0.2 | 1.9 | 0.0 | 3.39* |
| | Secondary AVS | 0.3 | 2.0 | 0.0 | |
| | Postsecondary institutions | 1.1 | 8.0 | 0.0 | |
| Materials and supplies[d] | School districts | 3.9 | 14.9 | 0.0 | 5.21** |
| | Secondary AVS | 3.3 | 10.5 | 0.0 | |
| | Postsecondary institutions | 1.0 | 4.7 | 0.0 | |
| Administration/overhead[d] | School districts | 0.1 | 1.1 | 0.0 | 3.61* |
| | Secondary AVS | 0.2 | 3.4 | 0.0 | |
| | Postsecondary institutions | 0.7 | 4.7 | 0.0 | |
| Instructional support staff[d] | School districts | 0.4 | 4.6 | 0.0 | 12.88*** |
| | Secondary AVS | 3.4 | 16.0 | 0.0 | |
| | Postsecondary institutions | 6.3 | 21.7 | 0.0 | |

[a]Weighted n = 5315; unweighted n = 575
[b]Weighted n = 694; unweighted n = 233
[c]Weighted n = 1125; unweighted n = 328
[d]Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

* $p < .05$
** $p < .01$
*** $p < .001$

how secondary vocational providers spent these funds is displayed in Exhibit 4.3. (Postsecondary institutions were not asked about LEP funds.)

Approximately 20-30% of LEP funds paid for paraprofessionals or aides in regular vocational classes. Another 20% of funds, on average, was spent on guidance, assessment or counseling services. Slightly more than 10% of LEP monies funded tutoring by native speakers outside of vocational classes, with another 10% used for bilingual curriculum development and 10% supporting teachers in separate vocational classes for LEP students.

Adult Funds

The majority of Perkins' funds for adults appear to be spent in three categories: staff for separate vocational classes; equipment; and guidance, assessment or counseling. These results are summarized in Exhibit 4.4.

Teachers or staff for separate vocational classes is the category with the largest average percentage of spending in each of the three types of vocational providers. Among school districts spending adults funds, nearly 40% of funds supported staff in separate classes for adults, while secondary AVS reported that half of adult funds, on average, were used in this category. Postsecondary institutions spent 26% of adult funds for staff in separate adult classes, a percentage significantly lower than that reported by secondary AVS.

School districts and postsecondary institutions spent approximately 25% of adult funds on equipment and 14% on guidance, assessment or counseling. Secondary AVS spent a slightly lower percentage of adult funds on these two activities (16% on equipment; 9% on assessment).

Single Parent/Homemaker Funds

Approximately 30% of Perkins' funds for single parents and homemakers was spent on guidance, assessment or counseling in each of the three types of vocational providers (Exhibit 4.5). The second largest average expenditure of these Title IIA funds was for teachers or staff in separate vocational classes. School districts and secondary AVS used nearly 20% of single parent/homemaker funds, on average, to pay staff salaries; while expenditures by postsecondary institutions averaged 14% in this category.

Exhibit 4.3

National Estimates of How Limited-English-Proficient Funds Were Spent by School Districts and Secondary Area Vocational Schools in 1986-87

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Paraprofessionals/aides in regular vocational classes | School districts[a] | 21.9 | 37.6 | 0.0 | 1.34 |
| | Secondary AVS[b] | 34.1 | 40.2 | 20.0 | |
| Teachers or staff for separate vocational classes | School districts | 8.3 | 24.2 | 0.0 | 0.89 |
| | Secondary AVS | 13.6 | 26.8 | 0.0 | |
| Tutoring by native speaker outside of vocational classes | School districts | 13.9 | 31.5 | 0.0 | 0.26 |
| | Secondary AVS | 12.1 | 26.0 | 0.0 | |
| Guidance, assessment or counseling | School districts | 17.3 | 32.2 | 0.0 | 0.49 |
| | Secondary AVS | 21.2 | 35.7 | 0.0 | |
| Bilingual vocational curriculum development | School districts | 9.2 | 26.2 | 0.0 | 0.40 |
| | Secondary AVS | 7.1 | 20.2 | 0.0 | |
| Equipment | School districts | 7.7 | 22.7 | 0.0 | 1.54 |
| | Secondary AVS | 2.0 | 6.2 | 0.0 | |
| Employability and job search activities | School districts | 6.0 | 19.5 | 0.0 | 1.75 |
| | Secondary AVS | 0.6 | 3.0 | 0.0 | |
| Materials and supplies[c] | School districts | 11.0 | 31.0 | 0.0 | 0.97 |
| | Secondary AVS | 5.6 | 15.8 | 0.0 | |



(continued)

Exhibit 4.3
(continued)

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Administration/overhead[C] | School districts | 0.2 | 1.9 | 0.0 | 0.35 |
| | Secondary AVS | 0.1 | 0.8 | 0.0 | |
| Instructional support staff[C] | School districts | 0.4 | 5.8 | 0.0 | 0.51 |
| | Secondary AVS | 1.2 | 7.8 | 0.0 | |
| Remediation/tutoring[C] | School districts | 1.4 | 11.3 | 0.0 | 0.27 |
| | Secondary AVS | 2.2 | 15.0 | 0.0 | |

[A]Weighted n = 556; unweighted n = 125
[B]Weighted n = 104; unweighted n = 27
[C]Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

Exhibit 4.4

National Estimates of How Adult Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Paraprofessionals/aides in vocational classes | School districts[a] | 3.8 | 15.2 | 0.0 | 0.36 |
| | Secondary AVS[b] | 4.1 | 11.8 | 0.0 | |
| | Postsecondary institutions[c] | 5.7 | 15.3 | 0.0 | |
| Teachers or staff for separate vocational classes | School districts | 37.9 | 42.2 | 16.0 | 8.42*** |
| | Secondary AVS | 49.9 | 41.3 | 50.0 | |
| | Postsecondary institutions | 26.2 | 37.9 | 0.0 | |
| Custodial or support staff to keep facilities open longer hours | School districts | 1.0 | 6.2 | 0.0 | 3.75* |
| | Secondary AVS | 2.0 | 5.9 | 0.0 | |
| | Postsecondary institutions | 0.3 | 2.1 | 0.0 | |
| Basic skills instruction in nonvocational classes | School districts | 3.1 | 11.2 | 0.0 | 5.15** |
| | Secondary AVS | 3.1 | 8.8 | 0.0 | |
| | Postsecondary institutions | 12.0 | 24.8 | 0.0 | |
| Guidance, assessment or counseling | School districts | 13.5 | 26.5 | 0.0 | 0.98 |
| | Secondary AVS | 9.2 | 19.3 | 0.0 | |
| | Postsecondary institutions | 13.6 | 22.2 | 0.0 | |
| Equipment | School districts | 25.7 | 38.1 | 0.0 | 1.17 |
| | Secondary AVS | 15.9 | 28.7 | 0.0 | |
| | Postsecondary institutions | 23.3 | 37.4 | 0.0 | |
| Student recruitment | School districts | 2.2 | 6.7 | 0.0 | 0.05 |
| | Secondary AVS | 2.9 | 10.2 | 0.0 | |
| | Postsecondary institutions | 2.9 | 9.8 | 0.0 | |
| Child care services | School districts | 1.1 | 8.0 | 0.0 | 1.13 |
| | Secondary AVS | 1.0 | 3.8 | 0.0 | |
| | Postsecondary institutions | 4.0 | 18.5 | 0.0 | |

Exhibit 4.4
(continued)

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Transportation | School districts | 2.0 | 5.2 | 0.0 | 1.71 |
| | Secondary AVS | 0.6 | 2.4 | 0.0 | |
| | Postsecondary institutions | 0.8 | 2.8 | 0.0 | |
| Job placement services | School districts | 1.7 | 8.0 | 0.0 | 0.23 |
| | Secondary AVS | 3.3 | 11.8 | 0.0 | |
| | Postsecondary institutions | 3.9 | 15.6 | 0.0 | |
| Materials and supplies[d] | School districts | 1.0 | 4.5 | 0.0 | 0.84 |
| | Secondary AVS | 1.1 | 4.4 | 0.0 | |
| | Postsecondary institutions | 2.6 | 10.3 | 0.0 | |
| Administration/overhead[d] | School districts | 0.6 | 3.5 | 0.0 | 0.76 |
| | Secondary AVS | 0.1 | 0.8 | 0.0 | |
| | Postsecondary institutions | 0.8 | 5.1 | 0.0 | |

[a]Weighted n = 294; unweighted n = 81
[b]Weighted n = 205; unweighted n = 99
[c]Weighted n = 629; unweighted n = 230
[d]Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

* $p < .05$
** $p < .01$
*** $p < .001$

Exhibit 4.5

National Estimates of How Single Parent/Homemaker Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Paraprofessionals/aides in regular vocational classes | School districts[a] | 3.2 | 9.7 | 0.0 | 0.75 |
| | Secondary AVS[b] | 8.6 | 22.8 | 0.0 | |
| | Postsecondary institutions[c] | 7.8 | 21.5 | 0.0 | |
| Teachers or staff for separate vocational classes | School districts | 18.6 | 31.1 | 0.0 | 0.69 |
| | Secondary AVS | 17.2 | 27.9 | 0.0 | |
| | Postsecondary institutions | 13.8 | 24.9 | 0.0 | |
| Custodial or support staff to keep facilities open longer hours | School districts | 0.7 | 3.0 | 0.0 | 0.69 |
| | Secondary AVS | 0.2 | 1.4 | 0.0 | |
| | Postsecondary institutions | 1.0 | 5.2 | 0.0 | |
| Basic skills instruction in nonvocational classes | School districts | 11.8 | 30.1 | 0.0 | 3.02 |
| | Secondary AVS | 2.8 | 6.3 | 0.0 | |
| | Postsecondary institutions | 5.2 | 15.8 | 0.0 | |
| Guidance, assessment or counseling | School districts | 28.1 | 34.2 | 10.0 | 0.69 |
| | Secondary AVS | 25.9 | 32.8 | 10.0 | |
| | Postsecondary institutions | 31.4 | 33.0 | 0.0 | |
| Equipment | School districts | 10.5 | 26.0 | 0.0 | 7.78*** |
| | Secondary AVS | 1.6 | 4.3 | 0.0 | |
| | Postsecondary institutions | 2.2 | 8.7 | 0.0 | |
| Student recruitment | School districts | 5.5 | 13.0 | 0.0 | 0.12 |
| | Secondary AVS | 6.1 | 14.0 | 0.0 | |
| | Postsecondary institutions | 5.3 | 11.3 | 0.0 | |

(continued)

Exhibit 4.5
(continued)

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Child care services | School districts | 9.2 | 20.5 | 0.0 | 0.39 |
| | Secondary AVS | 6.4 | 11.4 | 0.0 | |
| | Postsecondary institutions | 8.4 | 17.3 | 0.0 | |
| Transportation | School districts | 4.0 | 8.3 | 0.0 | 2.57 |
| | Secondary AVS | 10.5 | 23.6 | 0.0 | |
| | Postsecondary institutions | 5.4 | 14.8 | 0.0 | |
| Job placement services | School districts | 1.2 | 4.9 | 0.0 | 1.09 |
| | Secondary AVS | 3.3 | 4.9 | 3.0 | |
| | Postsecondary institutions | 2.6 | 6.9 | 0.0 | |
| Materials and supplies[d] | School districts | 0.6 | 3.3 | 0.0 | 0.16 |
| | Secondary AVS | 1.1 | 3.9 | 0.0 | |
| | Postsecondary institutions | 1.1 | 5.4 | 0.0 | |
| Administration/overhead[d] | School districts | 2.1 | 11.9 | 0.0 | 1.45 |
| | Secondary AVS | 0.0 | 0.0 | 0.0 | |
| | Postsecondary institutions | 2.1 | 9.2 | 0.0 | |
| Tuition reimbursement[d] | School districts | 1.3 | 10.0 | 0.0 | 4.29* |
| | Secondary AVS | 10.1 | 27.9 | 0.0 | |
| | Postsecondary institutions | 3.3 | 13.8 | 0.0 | |

[a]Weighted n = 418; unweighted n = 111
[b]Weighted n = 189; unweighted n = 71
[c]Weighted n = 629; unweighted n = 260
[d]Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

* $p < .05$
** $p < .001$

School districts spent an average of 11% of single parent/ homemaker funds for equipment. This is a higher percentage than the 2% reported by secondary AVS and postsecondary institutions, and is a statistically significant difference.

Secondary AVS spent an average of 10% of Perkins' funds for single parents/homemakers for tuition reimbursement. While this percentage is higher than the amount reported by either school districts or postsecondary institutions, all of these percentages are a result of coding information originally listed by respondents in an "other" category. Thus, the differences between the three types of providers may be an artifact of the way respondents listed or labeled the "other" expenditures.

Sex Equity Funds

Approximately 20% of Perkins' sex equity funds was spent in each of the three types of vocational providers to recruit students to nontraditional fields (Exhibit 4.6). Another 20% of funds, on average, supported counseling and career development activities.

In secondary AVS, 25% of sex equity funds, on average, paid for staff salaries in programs intended to increase participation in nontraditional fields. The average proportion of funds for staff salaries in districts was 16%; in postsecondary institutions, 22% of sex equity funds paid staff salaries.

There are two statistically significant differences in the way districts and institutions spent sex equity funds during 1986-87. School districts, on average, spent a larger proportion (26%) of sex equity funds on inservice staff development than either secondary AVS (13%) or postsecondary institutions (9%). Postsecondary institutions generally spent a larger proportion of sex equity funds on child care services (8%) than did secondary providers of vocational education.

Program Improvement Funds

The overwhelming majority of program improvement funds in 1986-87 was spent on equipment in school districts, secondary AVS and postsecondary institutions (Exhibit 4.7). On average, school districts and secondary AVS

Exhibit 4.6

National Estimates of How Sex Equity Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Inservice staff development | School districts[a] | 25.8 | 30.9 | 12.0 | 7.98*** |
| | Secondary AVS[b] | 13.1 | 25.2 | 0.0 | |
| | Postsecondary institutions[c] | 8.7 | 19.0 | 0.0 | |
| Development or modification ov vocational curriculum | School districts | 9.7 | 19.3 | 0.0 | 2.47 |
| | Secondary AVS | 2.8 | 9.2 | 0.0 | |
| | Postsecondary institutions | 5.2 | 18.0 | 0.0 | |
| Recruitment of students to nontraditional fields | School districts | 17.8 | 25.6 | 10.0 | 0.32 |
| | Secondary AVS | 22.3 | 32.0 | 2.0 | |
| | Postsecondary institutions | 21.1 | 30.0 | 5.0 | |
| Salaries for staff to provide programs increasing participation in nontraditional fields | School districts | 15.7 | 27.9 | 0.0 | 1.16 |
| | Secondary AVS | 24.9 | 35.6 | 0.0 | |
| | Postsecondary institutions | 22.3 | 30.7 | 5.0 | |
| Counseling and career development | School districts | 20.8 | 24.1 | 10.0 | 0.40 |
| | Secondary AVS | 17.9 | 29.7 | 5.0 | |
| | Postsecondary institutions | 16.7 | 22.9 | 10.0 | |
| Job placement services | School districts | 2.2 | 5.7 | 0.0 | 0.30 |
| | Secondary AVS | 1.9 | 7.6 | 0.0 | |
| | Postsecondary institutions | 2.2 | 9.0 | 0.0 | |
| Child care services | School districts | 0.6 | 3.0 | 0.0 | 4.44* |
| | Secondary AVS | 1.5 | 5.7 | 0.0 | |
| | Postsecondary institutions | 8.2 | 24.3 | 0.0 | |
| Transportation | School districts | 2.2 | 6.8 | 0.0 | 0.65 |
| | Secondary AVS | 1.3 | 3.5 | 0.0 | |
| | Postsecondary institutions | 1.8 | 5.0 | 0.0 | |

Exhibit 4.6
(continued)

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Materials and supplies[d] | School districts | 2.8 | 14.0 | 0.0 | 0.28 |
| | Secondary AVS | 3.2 | 8.5 | 0.0 | |
| | Postsecondary institutions | 2.0 | 9.0 | 0.0 | |
| Administration/overhead[d] | School districts | 0.2 | 2.0 | 0.0 | 0.79 |
| | Secondary AVS | 0.0 | 0.0 | 0.0 | |
| | Postsecondary institutions | 0.6 | 3.9 | 0.0 | |
| Tuition reimbursement[d] | School districts | n/a | n/a | n/a | n/a |
| | Secondary AVS | n/a | n/a | n/a | |
| | Postsecondary institutions | 4.1 | 16.9 | 0.0 | |

[a]Weighted n = 620; unweighted n = 146
[b]Weighted n = 203; unweighted n = 91
[c]Weighted n = 416; unweighted n = 148
[d]Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

* p <.05
** p <.01
*** p <.001

Exhibit 4.7

National Estimates of How Program Improvement Funds Were Spent by School Districts, Secondary Area Vocational Schools and Postsecondary Institutions in 1986-87

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Hired staff for new or expanded program | School districts[a] | 6.2 | 20.5 | 0.0 | 7.47*** |
| | Secondary AVS[b] | 12.9 | 25.5 | 0.0 | |
| | Postsecondary institutions[c] | 14.7 | 26.4 | 0.0 | |
| Inservice and preservice training | School districts | 7.2 | 19.4 | 0.0 | 2.35 |
| | Secondary AVS | 6.8 | 18.1 | 0.0 | |
| | Postsecondary institutions | 10.9 | 25.1 | 0.0 | |
| Expanded counseling and guidance services | School districts | 4.1 | 12.4 | 0.0 | 0.27 |
| | Secondary AVS | 5.2 | 14.9 | 0.0 | |
| | Postsecondary institutions | 5.0 | 16.0 | 0.0 | |
| Development of new or modified curriculum | School districts | 9.9 | 20.6 | 0.0 | 2.75 |
| | Secondary AVS | 5.3 | 13.5 | 0.0 | |
| | Postsecondary institutions | 9.4 | 20.3 | 0.0 | |
| Equipment | School districts | 63.0 | 37.7 | 75.0 | 3.32* |
| | Secondary AVS | 61.6 | 41.3 | 80.0 | |
| | Postsecondary institutions | 53.9 | 41.3 | 60.0 | |
| Renovated or expanded facilities | School districts | 0.8 | 6.5 | 0.0 | |
| | Secondary AVS | 1.8 | 6.3 | 0.0 | |
| | Postsecondary institutions | 0.6 | 5.3 | 0.0 | |
| Articulation agreement with secondary school | School districts | n/a | n/a | n/a | n/a |
| | Secondary AVS | n/a | n/a | n/a | |
| | Postsecondary institutions | 1.3 | 4.9 | 0.0 | |
| Articulation agreement with postsecondary | School districts | 0.3 | 2.1 | 0.0 | 0.89 |
| | Secondary AVS | 0.4 | 1.6 | 0.0 | |
| | Postsecondary institutions | 0.6 | 2.9 | 0.0 | |

Exhibit 4.7
(continued)

| How Funds Were Spent | Type of District/ Institution | Percent of Funds Spent | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|
| | | Mean | Standard Deviation | Median | |
| Industry-education partnership agreement | School districts | 1.0 | 7.7 | 0.0 | 0.38 |
| | Secondary AVS | 1.3 | 4.4 | 0.0 | |
| | Postsecondary institutions | 0.8 | 3.8 | 0.0 | |
| Materials and supplies[d] | School districts | 4.9 | 16.3 | 0.0 | 0.98 |
| | Secondary AVS | 3.3 | 11.6 | 0.0 | |
| | Postsecondary institutions | n/a | n/a | n/a | |

[a]Weighted n = 2893; unweighted n = 410
[b]Weighted n = 420; unweighted n = 158
[c]Weighted n = 1031; unweighted n = 301
[d]Categories coded from "other" responses and are likely to underestimate actual percentage of expenditures.

* p <.05
** p <.01
*** p <.001

reported spending approximately 62% of Title IIB funds on equipment. Half of the districts spent more than 75% of program improvement funds for equipment; among secondary AVS, the median was 80%. Postsecondary institutions spent an average of 54% of Title IIB funds for equipment, with a median of 60%.

In addition to equipment, approximately 15% of Title IIB monies paid for staff salaries for new or expanded programs in secondary AVS and postsecondary institutions. A significantly smaller proportion of funds (6%) was used in this way by school districts.

Approximately 10% of program improvement funds supported inservice and preservice staff training in each type of vocational setting. Postsecondary institutions and school districts also spent an average of 9-10% of Title IIB funds on curriculum development.

## 4.3 Prevalence of Spending Funds

In addition to looking at the average percentage of expenditure in a category, another way to explore how districts and institutions spent Perkins' funds is to look at the proportion of respondents that spent any funds in a particular category. Such an analysis indicates the most prevalent spending categories. In this section, we present the proportion of districts, secondary AVS and postsecondary institutions that spent any funds on various activities and services.

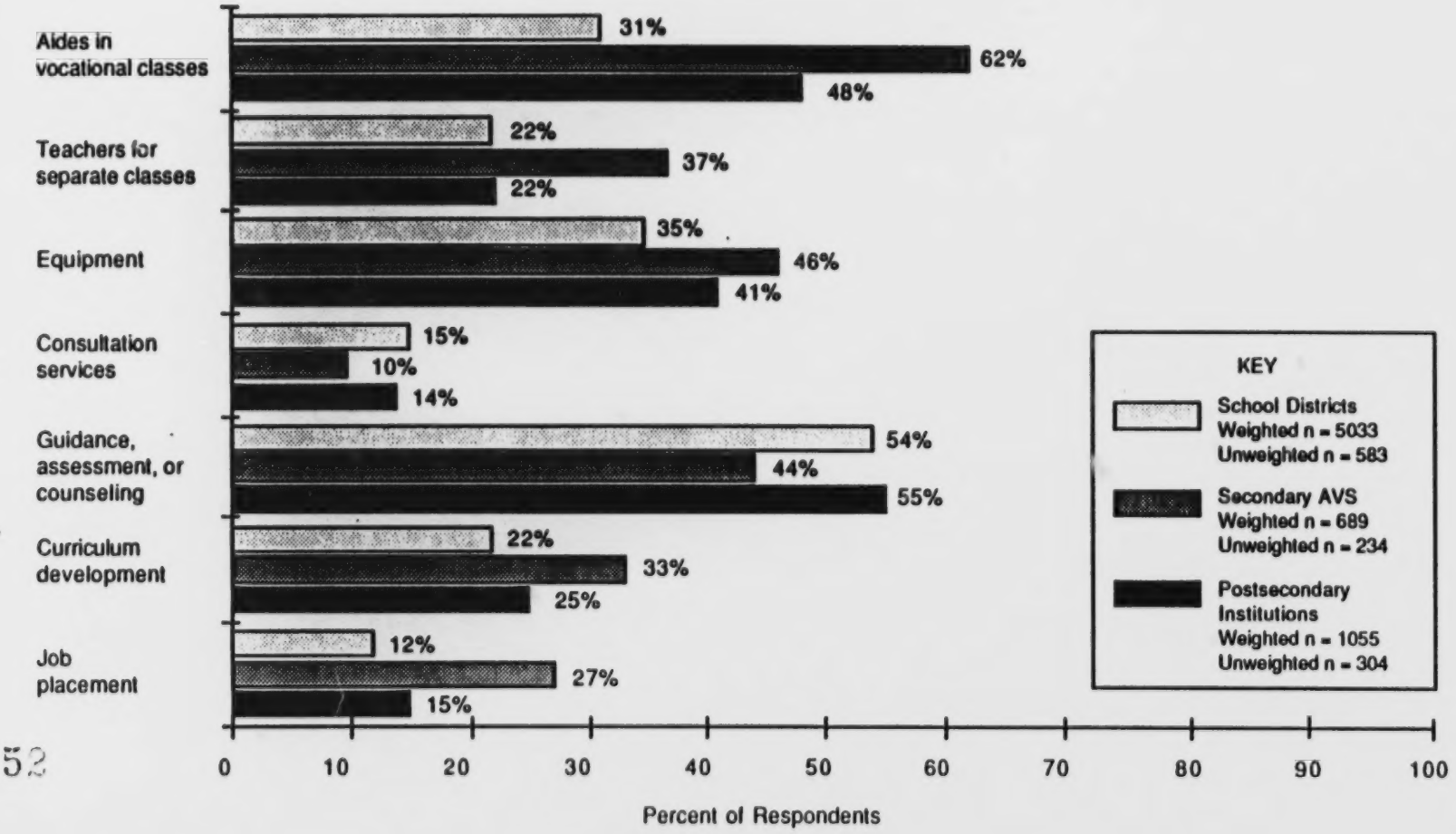
### Handicapped Funds

Exhibit 4.8 displays the percentage of districts, AVS and postsecondary institutions spending any handicapped funds in each category of program activity listed on the survey. In general, the most prevalent use of handicapped funds was for guidance, assessment or counseling services, where 44-55% of respondents spent a portion of funds. In addition, 35-46% of vocational providers spent a portion of handicapped funds on equipment.

A majority of secondary AVS (62%) used handicapped funds to support paraprofessionals or aides in vocational classes. In addition, 37% of AVS used handicapped funds to pay teachers' salaries for separate classes. These two findings corroborate the results suggested by the average percentage of expenditures: that AVS are more likely to use Perkins' handicapped funds to

Exhibit 4.8

Handicapped Funds:
Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions
Spending Any Perkins' Funds for Each Category of Program Activities



cover direct instructional costs than are school districts or postsecondary institutions.

Disadvantaged Funds

Among secondary AVS, the most prevalent use of disadvantaged funds was for paraprofessionals or aides in vocational classes (Exhibit 4.9). More than 61% of AVS reported spending some of their Perkins' disadvantaged money in this category. In addition, 42% of AVS used disadvantaged funds for guidance, assessment or counseling services, while 38% spent a portion of Perkins' disadvantaged funds on equipment.

Among school districts, the most prevalent use of Perkins' disadvantaged funds was for guidance, assessment and counseling, with 54% of districts spending funds for these services. Equipment was the second most common use of disadvantaged funds in school districts, reported by 33% of districts.

Sixty percent of postsecondary institutions spent a portion of Perkins' disadvantaged funds on guidance, assessment or counseling. In addition, 44% of these institutions used disadvantaged funds to pay for aides in vocational classes, and 40% used the monies to provide basic skills instruction.

Limited-English-Proficient (LEP) Funds

Exhibit 4.10 shows that the two most prevalent uses of LEP money were for (a) guidance, assessment or counseling (42% of districts; 46% of AVS) and (b) aides in vocational classes (34% of districts; 54% of AVS). In addition, 33% of AVS and 26% of districts spent a portion of LEP money on tutoring by a native speaker. Nearly a quarter of districts also spent some LEP money on job placement services.

Adult Funds

Clearly, the most prevalent use of adult funds was for teachers in separate classes (Exhibit 4.11). Nearly 70% of districts and secondary AVS and 42% of postsecondary institutions spent adult funds in this way.

Approximately 40% of each type of vocational provider used a portion of Perkins' adult money for equipment. In addition, 37% of districts, 38% of

Exhibit 4.9

Disadvantaged Funds:
Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions
Spending Any Perkins' Funds for Each Category of Program Activities

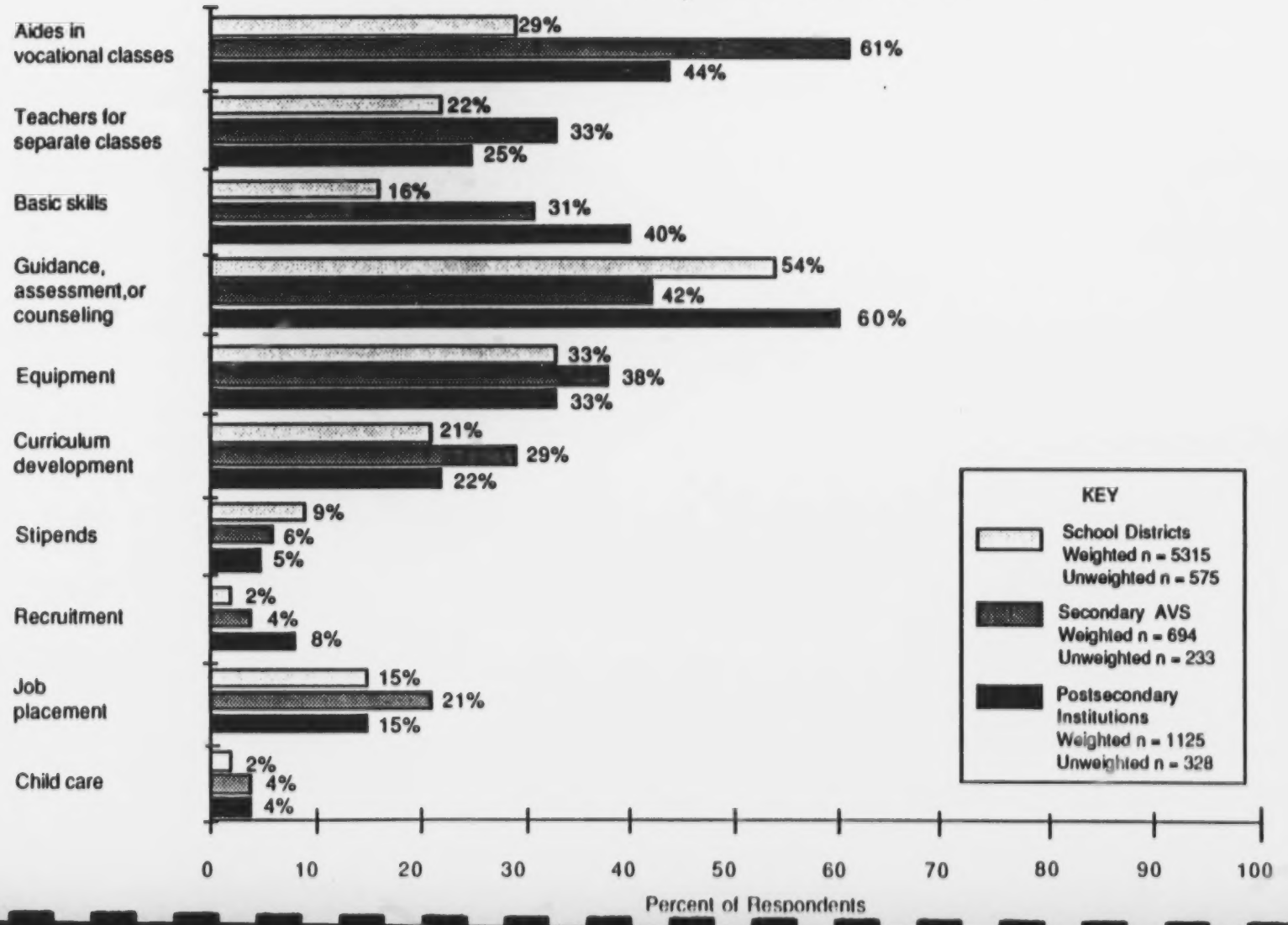


Exhibit 4.10

Limited-English-Proficient Funds:
Percent of Districts and Secondary Area Vocational Schools
Spending Any Perkins' Funds for Each Category of Program Activities

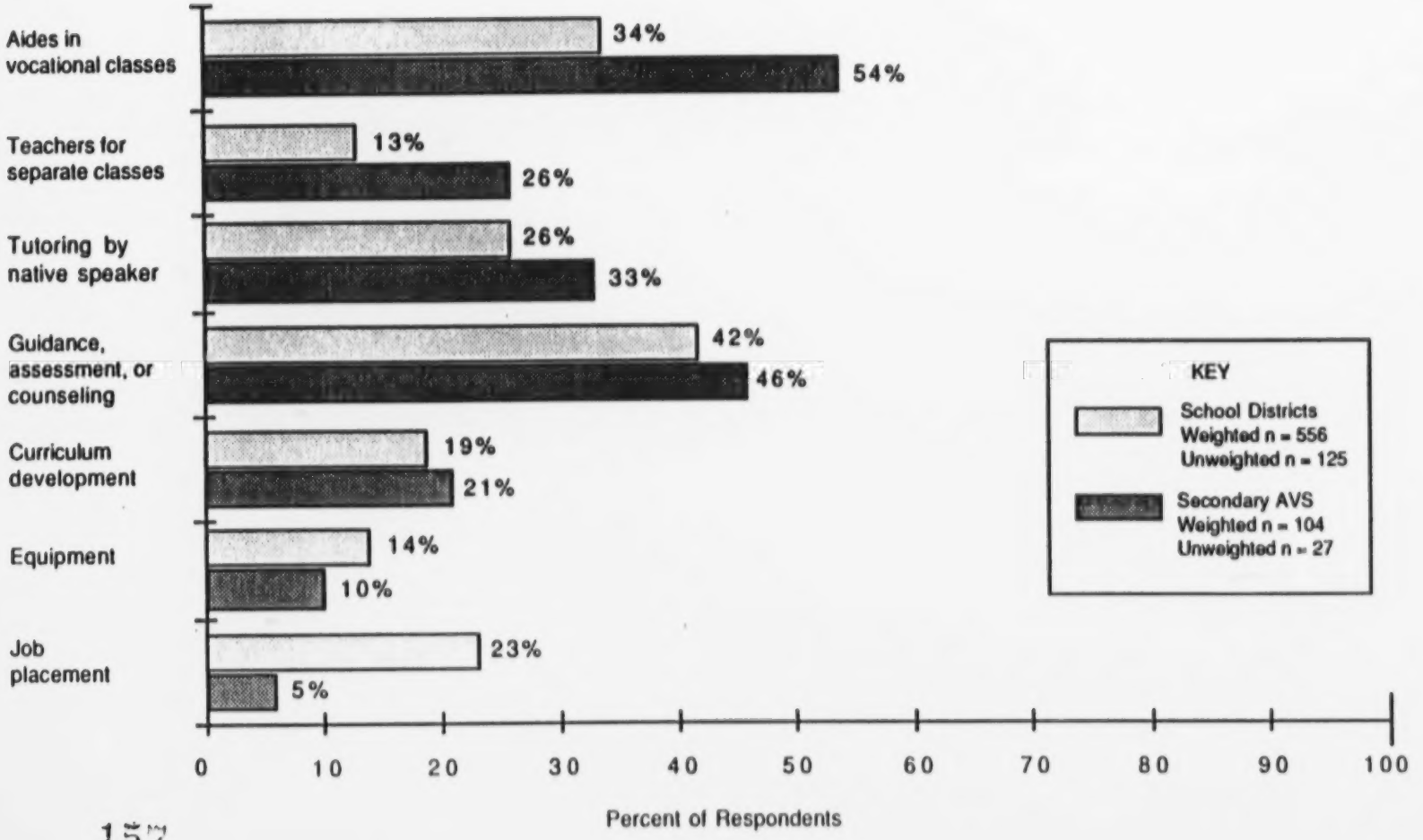
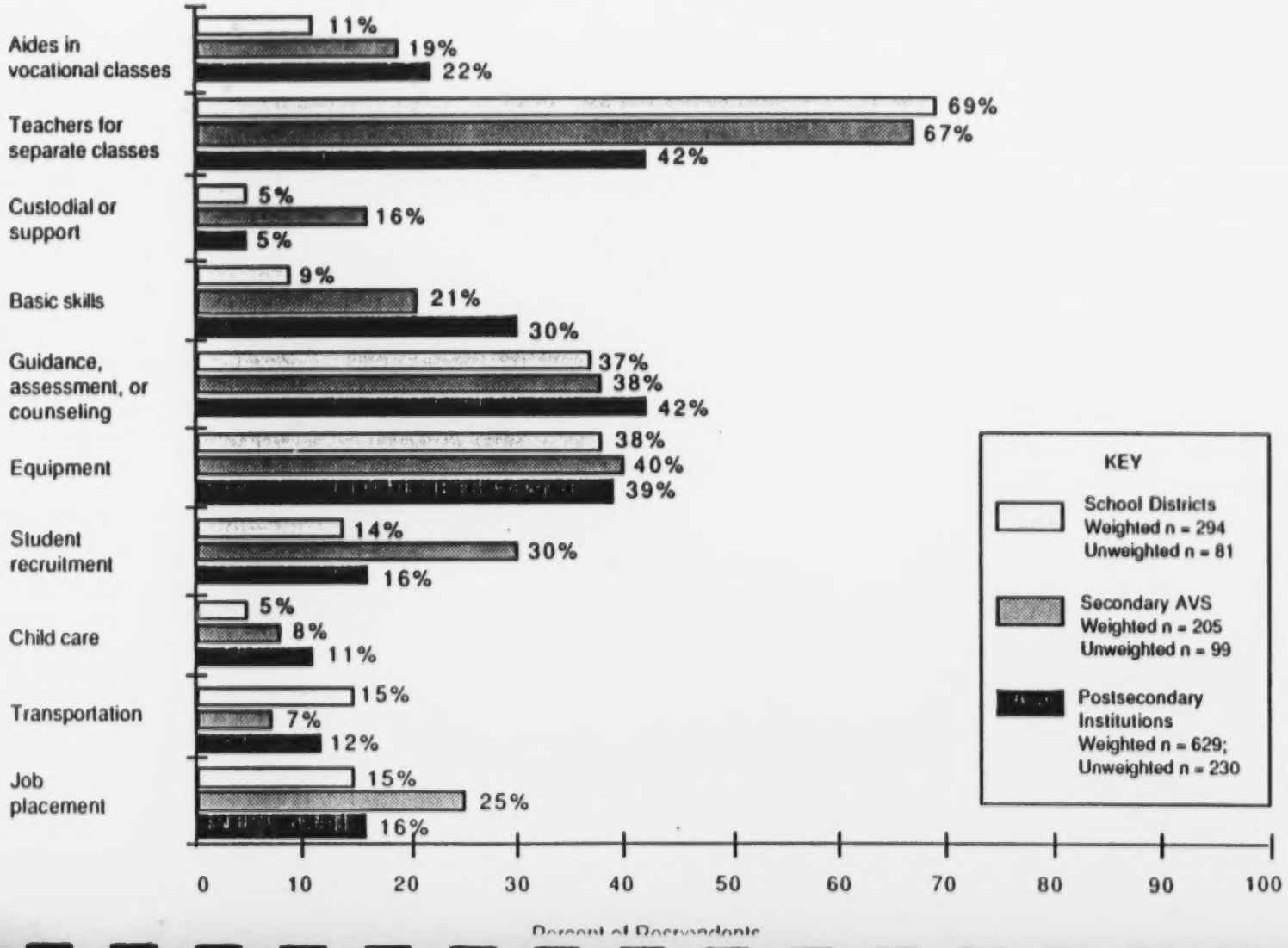


Exhibit 4.11

Adult Funds:
Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions
Spending Any Perkins' Funds for Each Category of Program Activities



AVS and 42% of postsecondary institutions spent Perkins' adult funds on guidance, assessment or counseling.

Single Parent/Homemaker Funds

Approximately 70% of districts, AVS and postsecondary institutions spent a portion of Perkins' funds for single parents/homemakers on guidance, assessment or counseling services (Exhibit 4.12). In addition, approximately 50% of providers used these funds to pay for child care services. More than half of the AVS (57%) and 47% of postsecondary institutions used single parent/homemaker funds for transportation, while 39% of districts reported expenditures in this category.

Sex Equity Funds

The majority of vocational providers used a portion of Perkins' sex equity money for counseling and career development activities (Exhibit 4.13). Sixty-six percent of districts, 54% of AVS and 56% of postsecondary institutions spent sex equity money in this way. In addition, 50-60% of each type of vocational provider spent a portion of their sex equity funds for recruitment of students to nontraditional fields.

Half of the postsecondary institutions used Perkins' sex equity funds to pay staff salaries, compared with 37% of secondary LEAs. In contrast, 65% of school districts used a portion of these federal funds for inservice staff development, compared with 38-39% of AVS and postsecondary institutions.

Program Improvement

Clearly, equipment was the most common use of Perkins' program improvement money (Exhibit 4.14). Eighty-six percent of school districts, 79% of AVS and 80% of postsecondary institutions spent at least some portion of their program improvement funds for equipment. No other spending category was cited by more than 40% of respondents.

Approximately 35% of postsecondary institutions used a portion of program improvement funds to hire staff for new programs, for inservice/preservice training or for curriculum development.

Exhibit 4.12

Single Parent/Homemaker Funds:
Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions
Spending Any Perkins' Funds for Each Category of Program Activities

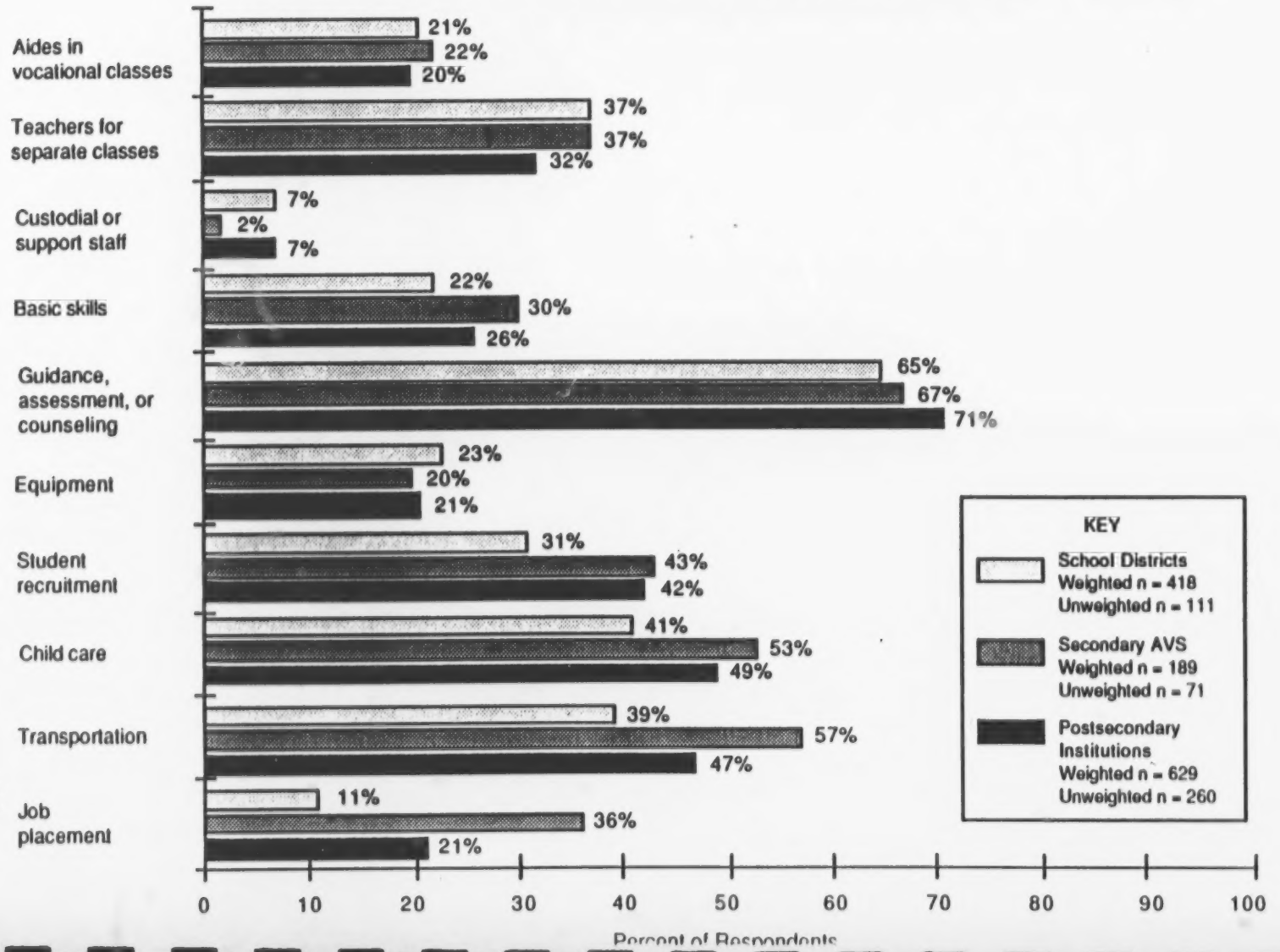


Exhibit 4.13

Sex Equity Funds:
Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions
Spending Any Perkins' Funds for Each Category of Program Activities

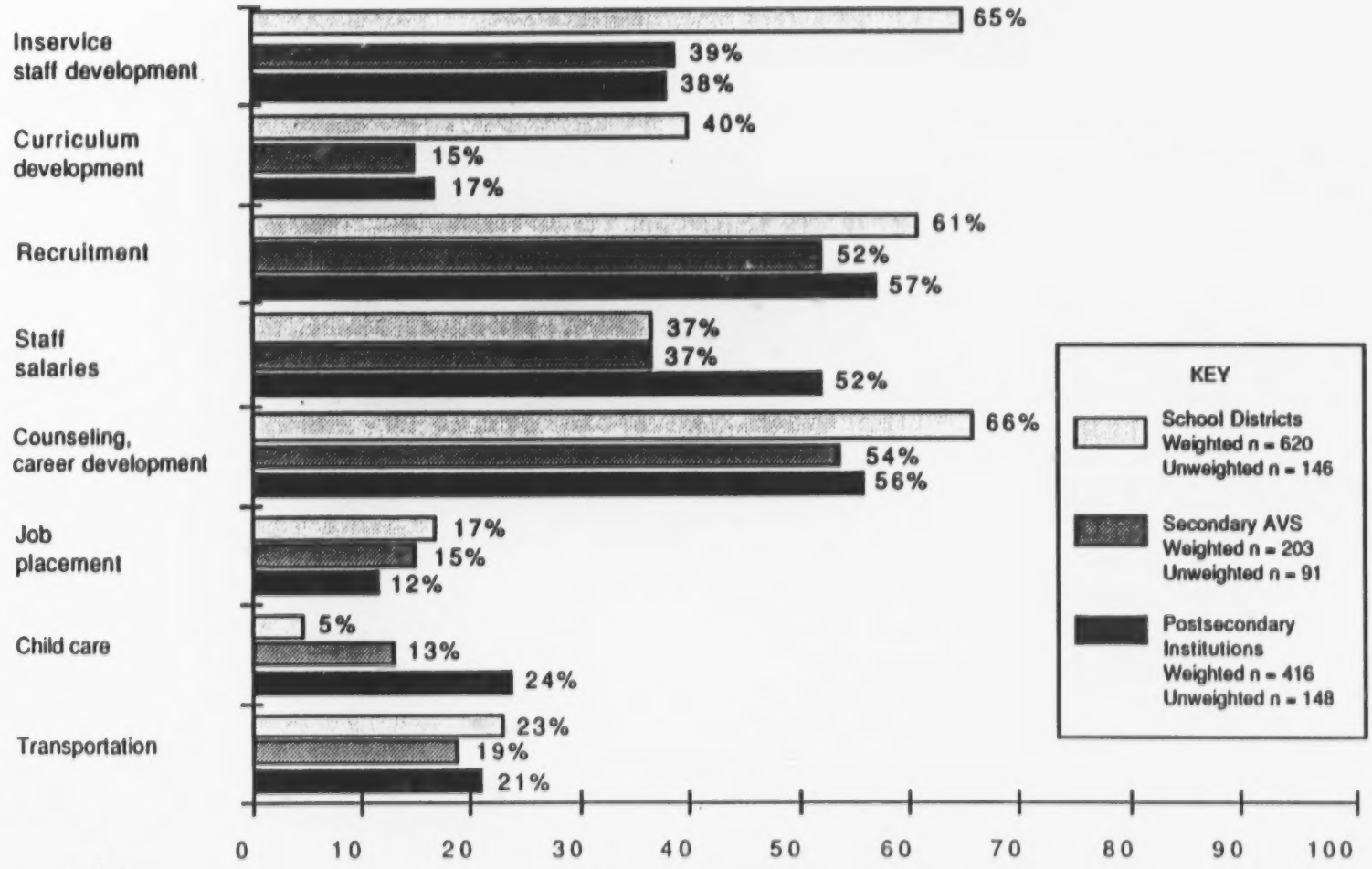
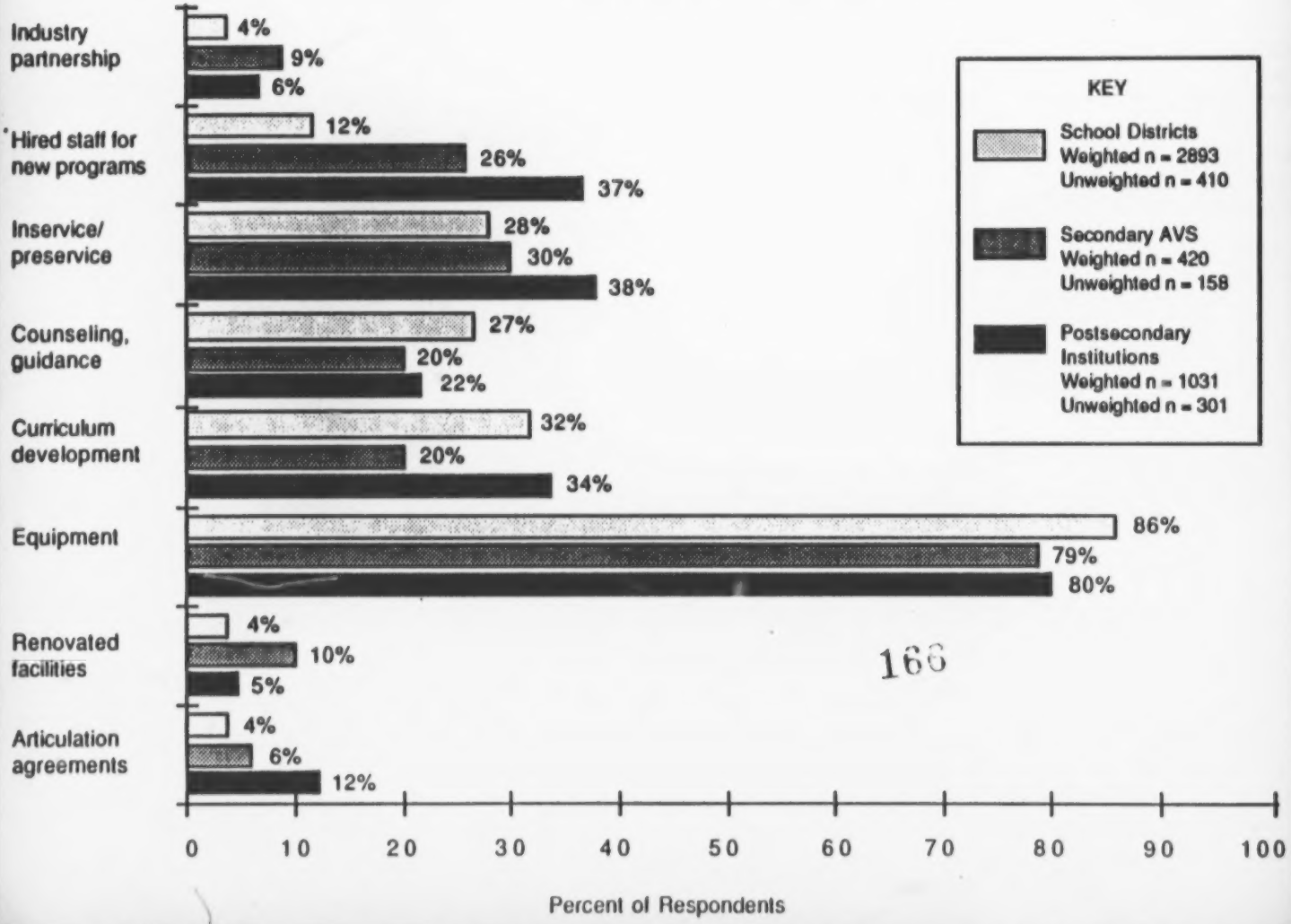


Exhibit 4.14

Program Improvement Funds:
Percent of Districts, Secondary Area Vocational Schools and Postsecondary Institutions
Spending Any Perkins' Funds for Each Category of Program Activities



## 4.4 Combining Perkins' Funds at the Postsecondary Level

The postsecondary survey asked respondents about combining monies from different categories of Perkins' funds. Questions centered on Title IIA funds for single parents/homemakers, adult, and sex equity and Title III funds for consumer and homemaking education. The results are displayed in Exhibit 4.15.

Less than 20% of postsecondary institutions reported combining Title IIA funds for single parents/homemakers, sex equity or adults to run joint programs. The weighted estimates indicate that 247 institutions (18.9%), out of the 1305 institutions responding to this question, combined any of these funds. Of the 247 institutions, 69% indicated that they combined Perkins' funds for single parents/homemakers with sex equity funds to run joint programs. Fewer institutions (57%) combined single parent/homemaker funds with adult funds. Less than a quarter of institutions combined sex equity funds with adult funds.

A small percentage of postsecondary institutions (17%) received Title III funds for consumer and homemaking programs. Of these institutions, an estimated 40% (78/196) combined these funds with Title IIA funds to run joint programs. Among this small group of institutions, the most likely combination, cited by 59% of the institutions, was Title III funds with single parent/homemaker funds. Title III funds were less likely to be combined with either sex equity funds (24%) or adult funds (14%).

## 4.5 Summary and Conclusions

This section summarizes the major findings on how Perkins' funds were spent in 1986-87. More detailed information can be found in earlier sections of this chapter.

- **School districts and postsecondary institutions were most likely to spend Perkins' handicapped funds on guidance, assessment or counseling; paraprofessionals or aides in the regular vocational classroom; and equipment.**

More than half of all districts and postsecondary institutions spent a portion of their handicapped funds on guidance, assessment and counseling.

Exhibit 4.15

National Estimates of Percentage of Postsecondary Institutions Combining Perkins' Funds in 1986-87

| | Percent of Institutions | Total # Responding | |
|---|---|---|---|
| | | Weighted | Unweighted |
| Combined Title IIA funds for single parents/homemakers, sex equity or adults | 18.9 | 1305 | 314 |
| Combined single parent/ homemaker and sex equity funds | 68.5 | 247 | 86 |
| Combined single parent/ homemaker and adult funds | 56.5 | 247 | 86 |
| Combined sex equity and adult funds | 22.6 | 247 | 86 |
| Combined Title III funds for consumer and homeamking with IIA funds | 40.1 | 196 | 71 |
| Combined Title III with single parent/homemaker funds | 59.1 | 78 | 18 |
| Combined Title III with sex equity funds | 24.0 | 78 | 18 |
| Combined Title III with adult funds | 13.7 | 78 | 18 |

Across districts and institutions, an average of 24% of Perkins' handicapped funds was spent on these services. Thirty-five percent of districts and 41% of postsecondary institutions spent handicapped funds on equipment, with an average expenditure of approximately 20%.

- **Secondary AVS were most likely to spend handicapped funds on direct instructional costs such as teachers or classroom aides.**

Sixty-two percent of AVS used an average of 36% of their Perkins' handicapped monies to pay for paraprofessionals or aides in the regular vocational classroom. Handicapped funds were used by 37% of AVS to pay teachers' salaries for separate vocational classes, averaging 19% of their Perkins' dollars for handicapped students.

- **On average across providers, a larger proportion of handicapped funds was used to support the special needs of handicapped students in regular or mainstreamed vocational classes than for separate classes.**

The proportion of handicapped funds used to support paraprofessionals or classroom aides was nearly twice the percentage used to pay teachers salaries for separate classes in secondary AVS (36% versus 19%) and postsecondary institutions (23% versus 12%). In school districts, an average of 20% of handicapped funds supported paraprofessionals or aides, compared with 13% for teachers of separate classrooms.

- **School districts were most likely to spend Perkins' funds for disadvantaged students on guidance, assessment or counseling; equipment; or paraprofessionals/aides in regular vocational classes.**

More than half of all districts spent some Perkins' disadvantaged money on guidance, assessment or counseling, averaging 22% of their total disadvantaged expenditures during 1986-87. Approximately 30% of districts spent disadvantaged funds on equipment or classroom aides, averaging 15-17% of their disadvantaged expenditures.

- **On average, AVS spent a large proportion of disadvantaged funds on direct instruction: aides in vocational classes, teachers for separate classes and basic skills instruction.**

Sixty-one percent of AVS spent disadvantaged funds on paraprofessionals or aides for regular vocational classes. On average, these

expenditures were 33% of their total disadvantaged expenditures in 1986-87. Approximately one third of AVS used disadvantaged funds for teachers' salaries, averaging 18% of spending, and basic skills instruction, averaging 13% of spending.

- **Postsecondary institutions were most likely to use Perkins' disadvantaged funds for aides in the regular vocational classroom; basic skills instruction; and guidance, assessment and counseling services.**

Sixty percent of postsecondary institutions spent Perkins' handicapped funds on guidance, assessment and counseling, with the average expenditure equaling 20% of their disadvantaged funds. Approximately 40% of institutions spent disadvantaged funds on basic skills instruction in nonvocational classes or for aides in vocational classes, each accounting for approximately 20% of their disadvantaged funds.

- **In districts and AVS, Perkins' funds for limited-English-proficient (LEP) students were spent primarily on classroom aides and for guidance, assessment or counseling services.**

More than half of the AVS and one third of districts receiving LEP funds used these federal dollars to support paraprofessionals or aides in regular vocational classes. These expenditures accounted for 22% of LEP spending in districts and 34% in AVS. Approximately 45% of secondary providers spent an average of 20% of LEP money on guidance, assessment and counseling.

- **Across the three types of providers, the most prevalent uses of Perkins' adult funds were for teachers in separate classes; guidance, assessment or counseling services; and equipment.**

Nearly 70% of districts and AVS used adult funds to pay teachers in separate classrooms. These salaries accounted for 38% of adult expenditures in districts and 50% of adult expenditures in AVS. Since secondary respondents were instructed to focus on the use of Perkins' funds for secondary-level programs, these funds may not represent the full range of adult funds spent by districts and AVS. In postsecondary institutions, 42% of institutions spent an average of 26% of adult funds on teachers' salaries for separate classes.

Approximately 40% of districts, AVS and postsecondary institutions used Perkins' adult funds for equipment. These expenditures averaged 26% of

district spending, 16% of AVS spending and 23% of postsecondary spending. In addition, 40% of each type of provider reported spending adult funds on guidance, assessment or counseling services, averaging 9-14% of expenditures.

- **Across providers, the largest proportion of Perkins' funds for single parents/homemakers was used for guidance, assessment and counseling services as well as for teachers in separate vocational classes.**

The majority of districts (65%), AVS (67%) and postsecondary institutions (71%) used some portion of their single parent/homemaker funds for guidance, assessment and counseling services. These expenditures averaged 26-31% of spending. Approximately 35% of providers used single parent/homemaker funds for staff or teachers in separate classes, averaging about 15% of spending.

- **The two most prevalent uses of Perkins' funds for sex equity were to recruit students to nontraditional fields and to provide counseling and career development activities.**

More than half of all districts, AVS and postsecondary institutions receiving sex equity funds used these federal dollars for student recruitment, accounting for approximately 20% of spending. Similarly, 54-66% of providers used Perkins' sex equity funds for counseling and career development activities, averaging 17-21% of spending.

- **The overwhelming majority of program improvement funds in 1986-87 was spent on equipment in school districts, secondary AVS and postsecondary institutions.**

Approximately 80-85% of vocational providers spent program improvement funds on equipment. On average, school districts spent 63% of program improvement funds on equipment, with half of districts spending more than 75% of their Title IIB funds in this one category. Among secondary AVS, an average of 62% of program improvement funds was spent on equipment, with half of all schools spending more than 80% on equipment. Postsecondary institutions spent on average of 54% of Title IIB funds on equipment, with half of the institutions spending more than 60% of program improvement funds in this one category.

## 5.0 SUPPLEMENTAL SERVICES FOR HANDICAPPED AND DISADVANTAGED SECONDARY STUDENTS

### 5.1 Introduction

Section 204 of the Perkins Act stipulated that each local education agency (LEA) receiving funds for disadvantaged and handicapped students must provide information to these students about opportunities in vocational education. In addition, the law mandated that each handicapped and disadvantaged student enrolled in vocational education programs in these LEAs should receive supplemental services to assist them in successfully completing vocational programs. The legislation listed four categories of services and activities:

- assessment of the interests, abilities, and special needs of each student;
- special services, including adaptation of curriculum, instruction, equipment, and facilities;
- guidance, counseling, and career development activities conducted by professionally trained counselors who are associated with the provision of such special services; and
- counseling services designed to facilitate the transition from school to post-school employment and career opportunities.

No specific funds were allocated for these services.

As part of this study, we were interested in finding out what proportion of districts and secondary area vocational schools (AVS) provided supplemental services as described in Section 204, and to how many handicapped and disadvantaged students. Based on the four categories outlined in the law, we listed six to eight supplemental services and activities specific to handicapped, academically disadvantaged, economically disadvantaged, and limited-English-proficient students. Respondents were asked to categorize the proportion of students receiving each service or activity as :"all", "most", "some" or "none".

In this chapter we present the results of these survey items. The proportion of students receiving supplemental services are compared for school districts and secondary area vocational schools. In addition, the likelihood of providing these services is analyzed in relation to (a) receiving Perkins' funding, (b) amount of Perkins' funding, and (c) school or district size.

## 5.2 Proportion of Handicapped and Disadvantaged Students Receiving Supplemental Services

### Handicapped Students

The proportion of handicapped students receiving supplemental services is presented in Exhibit 5.1. The districts and AVS with handicapped students enrolled in vocational education are included in these results; the small proportion of districts (16%) and AVS (3%) with no handicapped students enrolled in vocational education during 1986-87 skipped this section of the survey.

The majority of handicapped students in school districts and AVS received assessment and counseling. Approximately 60% of districts and 68% of AVS indicated that all handicapped students had assessments of vocational interests, abilities and special needs. More than 60% of each type of secondary LEA reported that all handicapped students were involved in guidance, counseling and career development activities. More than half of school districts and 60% of AVS indicated that all handicapped students received guidance and counseling on transition to further education or employment.

Fewer LEAs reported either adapted or simplified equipment, modified curriculum or modified facilities for all or most handicapped students. For example, only 15% of districts and 17% of AVS indicated that all handicapped students had modified facilities. Rather, approximately 40% of respondents reported that no handicapped students had modified facilities. In approximately 30% of districts, no handicapped students had adapted equipment, compared with 14% of AVS. Of course, it is quite possible that many handicapped students did not need these supplemental services.

### Academically Disadvantaged Students

The supplemental services for academically disadvantaged students are summarized in Exhibit 5.2. The districts and AVS with academically disadvantaged students enrolled in vocational education are included in these results; the small proportion of districts (12%) and AVS (3%) that indicated there were no academically disadvantaged students in vocational education during 1986-87 skipped this section of the survey.

Exhibit 5.1

National Estimates of Supplemental Services for Handicapped Vocational Students in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $X^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Assessment of vocational interests, abilities and special needs | All | 58.6 | 68.3 | 10.47* |
| | Most | 22.3 | 15.3 | (.12) |
| | Some | 14.5 | 15.2 | |
| | None | 4.5 | 1.3 | |
| Modified or adapted curriculum | All | 38.6 | 29.2 | 13.38** |
| | Most | 27.2 | 38.8 | (.13) |
| | Some | 30.7 | 30.1 | |
| | None | 3.5 | 2.0 | |
| Adapted or simplified equipment | All | 11.8 | 14.8 | 20.85*** |
| | Most | 13.1 | 13.2 | (.17) |
| | Some | 45.6 | 58.2 | |
| | None | 29.6 | 13.8 | |
| Modified facilities | All | 14.5 | 16.6 | 3.00 |
| | Most | 9.8 | 10.1 | (.06) |
| | Some | 34.1 | 38.4 | |
| | None | 41.7 | 34.9 | |

Continued

Exhibit 5.1
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Guidance, counseling and career development activities | All | 63.9 | 66.9 | 8.19* |
| | Most | 23.1 | 17.9 | (.11) |
| | Some | 11.0 | 14.7 | |
| | None | 3.0 | 0.5 | |
| Guidance and counseling on transition to further education or employment | All | 52.0 | 59.6 | 7.47 |
| | Most | 28.2 | 22.4 | (.10) |
| | Some | 16.2 | 17.1 | |
| | None | 3.6 | 0.9 | |

[a]Weighted n = 6833; unweighted n = 618
[b]Weighted n = 664; unweighted n = 234
* p <.05
** p <.01
*** p <.001

Exhibit 5.2

National Estimates of Supplemental Services for Academically Disadvantaged Vocational Students in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Assessment of vocational interests, abilities and special needs | All | 51.2 | 57.2 | 7.62 |
| | Most | 23.9 | 18.4 | (.10) |
| | Some | 19.9 | 22.9 | |
| | None | 4.9 | 1.5 | |
| Remedial basic skills instruction in vocational classes | All | 24.0 | 33.3 | 22.33*** |
| | Most | 26.9 | 36.3 | (.18) |
| | Some | 33.7 | 24.5 | |
| | None | 15.4 | 5.9 | |
| Remedial basic skills instruction in other classes (e.g., English) | All | 33.0 | 27.7 | 25.07*** |
| | Most | 24.8 | 31.7 | (.19) |
| | Some | 34.4 | 22.3 | |
| | None | 7.8 | 18.3 | |
| A summer job combined with vocational education | All | 2.8 | 0.7 | 26.59*** |
| | Most | 3.1 | 9.2 | (.19) |
| | Some | 43.5 | 55.8 | |
| | None | 50.6 | 34.3 | |

Continued





175

Exhibit 5.2
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Enrollment in vocationally-oriented school-within-a-school or alternative school | All | 4.2 | 14.8 | 39.34*** |
| | Most | 5.6 | 9.6 | (.23) |
| | Some | 21.9 | 29.2 | |
| | None | 68.2 | 46.4 | |
| A modified vocational curriculum (e.g., simplified language in technical manuals) | All | 8.3 | 15.9 | 43.68*** |
| | Most | 14.5 | 16.8 | (.25) |
| | Some | 37.1 | 52.6 | |
| | None | 40.1 | 14.6 | |
| Guidance, counseling and career development activities | All | 56.4 | 55.2 | 0.94 |
| | Most | 21.5 | 22.3 | (.04) |
| | Some | 19.3 | 20.8 | |
| | None | 2.8 | 1.7 | |
| Guidance and counseling on transition to further education or employment | All | 45.8 | 48.4 | 2.75 |
| | Most | 25.7 | 24.4 | (.06) |
| | Some | 25.6 | 22.1 | |
| | None | 2.9 | 5.0 | |

[a]Weighted n = 7169; unweighted n = 610
[b]Weighted n = 594; unweighted n = 214
*** p <.001

Approximately half of districts and AVS reported that all academically disadvantaged students received assessment, guidance, counseling and career development services. Another 20% indicated that most academically disadvantaged students received these services. For example, 51% of districts and 57% of AVS indicated that all of their academically disadvantaged students received assessment of their vocational interests, abilities and special needs. In 24% of districts and 18% of AVS, most academically disadvantaged students were assessed. Similarly, approximately 55% of both districts and AVS provided guidance, counseling and career development activities to all academically disadvantaged students. Between 46% and 48% of secondary LEAs provided guidance and counseling on transition to further education or employment to most academically disadvantaged students. These services directly match three of the categories outlined in Section 204 of the Perkins Act.

Special services, such as adaptation of curriculum and instruction, comprise the fourth category of supplemental services listed in the law. More than 85% of the AVS offered a modified vocational curriculum to at least some (i.e., "all", "most" or "some") of their academically disadvantaged students. Districts were less likely to adapt the curriculum for academically disadvantaged students, with nearly 40% of districts not undertaking this activity at all.

One third of the AVS provided remedial basic skills instruction in vocational classes to all academically disadvantaged students, while 28% offered this remediation to all academically disadvantaged students in nonvocational classes. The setting for remedial basic skills instruction was somewhat reversed in school districts where one third offered basic skills instruction to all in nonvocational classes, and 24% offered this type of remediation to all academically disadvantaged students in vocational classes. Of course, this difference in the setting of remedial basic skills instruction in districts and AVS reflects the emphasis of course offerings in the two types of LEAs.

Two supplemental services were listed on the survey that were not directly included in Section 204: (a) summer jobs combined with vocational education, and (b) a vocationally oriented school-within-a-school or alternative program. Few secondary LEAs made these programs and services available

to all students. However, about 66% of AVS and 49% of school districts provided summer jobs to at least some academically disadvantaged students.

Economically Disadvantaged Students

The supplemental services provided to economically disadvantaged students are reported in Exhibit 5.3. The districts and AVS with economically disadvantaged students enrolled in vocational education are included in these results; the small proportion of districts (11%) and AVS (4%) that indicated there were no economically disadvantaged students in vocational education during 1986-87 skipped this section of the survey.

In 40-50% of secondary LEAs, all economically disadvantaged students received assessment, counseling and career development services, with no differences between school districts and AVS. Approximately 44% of districts and AVS reported that all economically disadvantaged students received assessments of vocational interests, abilities and special needs. Half of districts and 56% of AVS indicated that all economically disadvantaged students were involved in guidance, counseling and career development activities, with another 25% indicating that most economically disadvantaged students received these services.

Students at AVS were more likely to have jobs or stipends than students in school districts. For example, 72% of AVS compared with 44% of districts reported any economically disadvantaged students involved in paid employment through a school-coordinated program. Similarly, 50% of AVS, compared with 33% of districts, indicated that any students received a stipend or subsidized employment.

Limited-English-Proficient (LEP) Students

The supplemental services provided to students with limited English proficiency are summarized in Exhibit 5.4. Only those districts (19%) and AVS (26%) with LEP students enrolled in vocational education are included in these results; respondents that indicated there were no LEP students enrolled in vocational education during 1986-87 skipped this section of the survey.

Approximately half of secondary LEAs provided assessment, counseling and career development services to students with limited English

Exhibit 5.3

National Estimates of Supplemental Services for Economically Disadvantaged Vocational Students in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $X^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Assessment of vocational interests, abilities and special needs | All | 42.4 | 44.9 | 6.54 |
| | Most | 23.7 | 23.0 | (.10) |
| | Some | 27.7 | 30.4 | |
| | None | 6.2 | 1.6 | |
| A summer job combined with vocational education | All | 4.3 | 0.8 | 20.70*** |
| | Most | 7.1 | 15.2 | (.17) |
| | Some | 40.4 | 47.1 | |
| | None | 48.2 | 37.0 | |
| Paid employment through a school-coordinated program (e.g., cooperative vocational education) | All | 3.8 | 0.6 | 54.35*** |
| | Most | 5.1 | 7.7 | (.27) |
| | Some | 35.4 | 63.3 | |
| | None | 55.8 | 28.4 | |
| A stipend or subsidized employment in conjunction with vocational education (e.g., work-study program) | All | 3.6 | 0.2 | 31.87*** |
| | Most | 2.8 | 5.4 | (.21) |
| | Some | 26.1 | 44.8 | |
| | None | 67.5 | 49.6 | |

Continued

Exhibit 5.3
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Modification of curriculum to accommodate a job during school hours | All | 4.8 | 2.9 | 23.35*** |
| | Most | 6.8 | 15.4 | (.18) |
| | Some | 41.2 | 50.0 | |
| | None | 47.2 | 31.7 | |
| Guidance, counseling and career development activities | All | 49.9 | 55.8 | 5.72 |
| | Most | 23.7 | 26.2 | (.09) |
| | Some | 23.7 | 16.8 | |
| | None | 2.6 | 1.2 | |
| Guidance and counseling on transition to further education or employment | All | 41.4 | 46.0 | 10.13* |
| | Most | 24.7 | 30.2 | (.12) |
| | Some | 31.2 | 19.6 | |
| | None | 2.7 | 4.2 | |

[a]Weighted n = 7183; unweighted n = 589
[b]Weighted n = 603; unweighted n = 214
* $p < .05$
** $p < .0$
*** $p < .00$

Exhibit 5.4

National Estimates of Supplemental Services for Limited-English-Proficient (LEP) Vocational Students in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Vocational tutoring or assistance by native speaker outside of regular class | All | 16.4 | 36.9 | 9.76* |
| | Most | 11.6 | 10.7 | (.24) |
| | Some | 29.2 | 25.1 | |
| | None | 42.7 | 27.3 | |
| Assessment of vocational interests, abilities and special needs | All | 46.9 | 55.6 | 1.65 |
| | Most | 15.4 | 10.0 | (.10) |
| | Some | 28.0 | 24.4 | |
| | None | 9.7 | 9.9 | |
| Modified vocational curriculum (e.g., technical manuals in native language) | All | 6.9 | 7.8 | 10.45* |
| | Most | 11.4 | 30.1 | (.25) |
| | Some | 23.1 | 22.2 | |
| | None | 58.6 | 39.9 | |
| Guidance, counseling and career development activities | All | 58.5 | 42.7 | 4.33 |
| | Most | 22.4 | 34.2 | (.16) |
| | Some | 15.5 | 17.9 | |
| | None | 3.6 | 5.2 | |

Continued

Exhibit 5.4
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | Districts[a] | AVS[b] | |
| Guidance and counseling on transition to further education or employment | All | 50.2 | 38.5 | 3.29* |
| | Most | 22.4 | 34.3 | (.14) |
| | Some | 21.9 | 21.9 | |
| | None | 5.5 | 5.2 | |
| Bilingual basic skills instruction | All | 40.3 | 15.6 | 11.87** |
| | Most | 15.2 | 21.3 | (.26) |
| | Some | 20.7 | 34.7 | |
| | None | 23.8 | 28.3 | |

[a]Weighted n = 1520; unweighted n = 244
[b]Weighted n = 192; unweighted n = 65
* $p < .05$
** $p < .01$

proficiency. As Exhibit 5.4 illustrates, 47% of districts and 56% of AVS reported that all LEP students received assessment of vocational interests, abilities and special needs. In addition, 59% of districts and 43% of AVS provided guidance, counseling and career development activities for all LEP students. Half of the districts and 39% of AVS offered guidance and counseling on transition to further education or employment to all LEP students.

LEP students at an AVS were more likely to have vocational tutoring by a native speaker or modified curriculum materials than LEP students in school districts. For example, 37% of AVS reported that all LEP students received tutoring by a native speaker, as compared with only 16% of districts offering this to all LEP students. In 43% of school districts, no LEP students received this type of tutoring. However, 40% of school districts reported that all LEP students received bilingual basic skills instruction, a significantly higher percentage than among AVS (16%).

## 5.3 Supplemental Services Related to Spending Perkins' Funds

In this section we look at whether providing supplemental services to handicapped and disadvantaged students is related to spending these Perkins' Title IIA funds. For each category of supplemental services, the proportion of districts and AVS providing services is presented separately for those spending and not spending the corresponding category of Perkins' funds. For example, the proportion of districts providing modified equipment for handicapped students during 1986-87 is shown for those districts that spent Perkins' handicapped funds during 1986-87 and those districts that did not spend these federal monies. In this way, the relationship between federal dollars and supplemental services to students in targeted populations can be explored.

### Handicapped Students

Exhibit 5.5 displays the proportion of districts and AVS providing supplemental services to handicapped students according to whether they spent Perkins' funds for handicapped students. The districts and AVS with handicapped students enrolled in vocational education are included in the analysis; the small proportion of districts (16%) and AVS (3%) with no

Exhibit 5.5

National Estimates of Relationship Between Supplemental Services for Handicapped Vocational Students and Spending Perkins' Handicapped Funds in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts: Spending Handic. Funds[a] | Percent of Districts: Not Spending Handic. Funds[b] | Percent of Districts: $x^2$ Statistic (Measure of Association) | Percent of AVS: Spending Handic. Funds[c] | Percent of AVS: Not Spending Handic. Funds[d] | Percent of AVS: $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|
| Assessment of vocational interests, abilities and special needs | All | 58.5 | 57.4 | 14.56** | 73.3 | 44.0 | 12.90** |
| | Most | 25.1 | 18.9 | (.17) | 13.8 | 22.0 | (.25) |
| | Some | 14.5 | 14.8 | | 12.5 | 31.0 | |
| | None | 1.9 | 8.9 | | 0.4 | 3.0 | |
| Modified or adapted curriculum | All | 36.7 | 42.0 | 8.67* | 31.6 | 16.9 | 3.95 |
| | Most | 30.7 | 20.2 | (.13) | 37.7 | 46.6 | (.14) |
| | Some | 30.1 | 32.5 | | 28.2 | 36.5 | |
| | None | 2.5 | 5.4 | | 2.4 | 0.0 | |
| Adapted or simplified equipment | All | 7.5 | 18.0 | 18.53*** | 15.5 | 11.7 | 1.89 |
| | Most | 15.8 | 9.2 | (.19) | 12.2 | 19.7 | (.09) |
| | Some | 49.0 | 39.4 | | 59.3 | 52.1 | |
| | None | 27.7 | 33.4 | | 13.0 | 16.5 | |
| Modified facilities | All | 14.4 | 14.0 | 25.53*** | 15.7 | 23.0 | 1.93 |
| | Most | 13.1 | 4.8 | (.23) | 10.1 | 11.0 | (.10) |
| | Some | 38.4 | 26.2 | | 40.4 | 28.9 | |
| | None | 34.1 | 55.1 | | 33.8 | 37.1 | |

Continued

Exhibit 5.5
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts: Spending Handic. Funds[a] | Percent of Districts: Not Spending Handic. Funds[b] | Percent of Districts: $x^2$ Statistic (Measure of Association) | Percent of AVS: Spending Handic. Funds[c] | Percent of AVS: Not Spending Handic. Funds[d] | Percent of AVS: $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|
| Guidance, counseling and career development activities | All | 62.4 | 62.7 | 15.17** | 72.1 | 38.7 | 17.94*** |
| | Most | 27.2 | 17.5 | (.18) | 17.0 | 24.1 | (.29) |
| | Some | 9.1 | 14.1 | | 10.9 | 37.2 | |
| | None | 1.3 | 5.8 | | 0.0 | 0.0 | |
| Guidance and counseling on transition to further education or employment | All | 44.7 | 62.2 | 26.82*** | 64.8 | 30.7 | 20.11*** |
| | Most | 36.2 | 16.5 | (.23) | 21.5 | 29.1 | (.31) |
| | Some | 16.8 | 15.5 | | 13.7 | 37.2 | |
| | None | 2.3 | 5.8 | | 0.0 | 3.0 | |

[a]Weighted n = 4144; unweighted n = 493
[b]Weighted n = 2585; unweighted n = 123
[c]Weighted n = 559; unweighted n = 204
[d]Weighted n = 99; unweighted n = 28
* p <.05
** p <.01
*** p <.001

handicapped students in vocational education during 1986-87 skipped this section of the survey.

School Districts. The strongest relationship between spending federal dollars for handicapped students and providing supplemental services appears to be related to high-cost expenditures such as modified equipment and facilities. Approximately 66% of districts that spent Perkins' funds reported providing modified facilities for at least some handicapped students (i.e., "all", "most" or "some"), as compared with 45% of districts that did not spend these federal dollars. Similarly, 72% of districts spending handicapped funds indicated that they adapted or simplified equipment for at least some handicapped students, compared with 67% of districts not spending Perkins' handicapped funds.

For supplemental services related to assessment and counseling, there are few meaningful differences between districts that did and did not spend Perkins' handicapped funds. For example, only 9% of districts that did not spend any handicapped funds, as compared with 2% of districts that did spent these Perkins' funds, reported that they did not provide assessment of vocational interests, abilities and special needs to any handicapped students. While this difference is statistically significant, the seven percent differential is not educationally meaningful, particularly since approximately 58% of districts, regardless of whether they spent Perkins' handicapped funds, provided assessment to all handicapped students. Similarly, 6% of districts not spending handicapped funds, as compared with 1% of districts spending funds, did not provide guidance, counseling or career development activities to any handicapped students. although 62-63% of each type of LEA provided these services to all handicapped students.

Other statistically significant results are a function of differences between providing services to "all" versus "most" students. For example, among districts spending handicapped funds, 45% provided guidance and counseling services on transition to further education or employment to all handicapped students, while 36% provided these services to most handicapped students. In contrast, among districts that did not spend handicapped funds, a higher proportion (62%) provided these counseling services to all handicapped students and a smaller proportion (17%) to most students. By combining these figures for both types of districts, the result is that approximately

80% of respondents provided these services to all or most handicapped students; thus, these statistically significant differences shown in Exhibit 5.5 are of little substantive importance.

Area Vocational Schools (AVS). Since more than 80% of AVS spent handicapped funds during 1986-87, the actual number of institutions that did not spend these funds is too small to give reliable national estimates. Thus, the figures presented in Exhibit 5.5 for AVS should be interpreted with caution.

These caveats notwithstanding, the three statistically significant results shown in Exhibit 5.5 point to the same finding: AVS spending Perkins' handicapped funds were more likely to offer assessment and counseling services to all handicapped students than were institutions that did not receive these federal dollars. For example, 73% of AVS spending handicapped funds provided assessment of vocational interests, abilities and special needs to all handicapped students, as compared with 44% not spending these funds. Similarly, guidance, counseling and career development activities were provided to all handicapped students in 72% of AVS spending handicapped funds, as compared with only 39% of institutions not spending these federal dollars. Guidance and counseling services on transition to further education or employment were provided to all handicapped students in 65% of AVS spending Perkins' handicapped funds, and in only 31% of AVS not spending these funds.

## Academically Disadvantaged Students

Exhibit 5.6 presents the relationship between spending Perkins' disadvantaged funds and providing supplemental services to academically disadvantaged students. Districts and AVS with academically disadvantaged students enrolled in vocational education are included in the analysis; the small proportion of districts (12%) and AVS (3%) that indicated there were no academically disadvantaged students enrolled in vocational education during 1986-87 skipped this section of the survey.

School Districts. Districts spending Perkins' funds for disadvantaged students were more likely to provide assessment services for a greater proportion of academically disadvantaged students than were districts that did not spend these federal dollars. However, while statistically significant, these differences are generally small in magnitude. For example,

Exhibit 5.6

National Estimates of Relationship Between Supplemental Services for Academically Disadvantaged Vocational Students and Spending Perkins' Disadvantaged Funds in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts: Spending Disadv. Funds[a] | Percent of Districts: Not Spending Disadv. Funds[b] | Districts: $x^2$ Statistic (Measure of Association) | Percent of AVS: Spending Disadv. Funds[c] | Percent of AVS: Not Spending Disadv. Funds[d] | AVS: $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|
| Assessment of vocational interests, abilities and special needs | All | 54.2 | 48.5 | 16.28** | 62.6 | 29.1 | 16.96*** |
| | Most | 25.6 | 20.7 | (.18) | 18.8 | 22.7 | (.30) |
| | Some | 18.4 | 21.7 | | 18.0 | 48.2 | |
| | None | 1.8 | 9.1 | | 1.2 | 0.0 | |
| Remedial basic skills instruction in vocational classes | All | 25.7 | 23.3 | 25.52*** | 35.7 | 11.6 | 18.05*** |
| | Most | 33.1 | 18.6 | (.22) | 35.8 | 44.6 | (.31) |
| | Some | 31.6 | 34.9 | | 25.4 | 24.2 | |
| | None | 9.6 | 23.1 | | 3.1 | 19.5 | |
| Remedial basic skills instruction in other classes (e.g., English) | All | 21.8 | 47.8 | 45.54*** | 30.1 | 18.5 | 7.67 |
| | Most | 32.6 | 16.2 | (.30) | 25.8 | 49.8 | (.20) |
| | Some | 35.6 | 31.7 | | 24.2 | 17.5 | |
| | None | 10.0 | 4.2 | | 19.9 | 14.2 | |
| A summer job combined with vocational education | All | 0.5 | 5.7 | 12.36** | 0.2 | 0.0 | 3.31 |
| | Most | 3.1 | 3.2 | (.16) | 11.0 | 2.8 | (.13) |
| | Some | 45.0 | 42.8 | | 55.7 | 51.7 | |
| | None | 51.4 | 48.3 | | 33.1 | 45.5 | |

Continued

Exhibit 5.6
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts: Spending Disadv. Funds[a] | Percent of Districts: Not Spending Disadv. Funds[b] | Percent of Districts: $x^2$ Statistic (Measure of Association) | Percent of AVS: Spending Disadv. Funds[c] | Percent of AVS: Not Spending Disadv. Funds[d] | Percent of AVS: $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|
| Enrollment in vocationally-oriented school-within-a-school or alternative school | All | 2.2 | 6.9 | 15.51** | 17.8 | 1.0 | 6.57 |
| | Most | 5.5 | 6.1 | (.17) | 8.1 | 7.5 | (.19) |
| | Some | 26.1 | 14.6 | | 29.5 | 32.7 | |
| | None | 66.2 | 72.4 | | 44.6 | 58.7 | |
| A modified vocational curriculum (e.g., simplified language in technical manuals) | All | 7.1 | 10.4 | 5.79 | 19.9 | 1.0 | 12.84** |
| | Most | 16.9 | 12.3 | (.11) | 15.7 | 10.9 | (.26) |
| | Some | 38.7 | 33.5 | | 53.2 | 58.7 | |
| | None | 37.3 | 43.9 | | 11.2 | 29.3 | |
| Guidance, counseling and career development activities | All | 57.8 | 54.0 | 17.53*** | 65.2 | 19.9 | 25.51*** |
| | Most | 24.1 | 18.1 | (.18) | 17.1 | 35.7 | (.37) |
| | Some | 17.8 | 21.9 | | 16.2 | 44.4 | |
| | None | 0.4 | 6.0 | | 1.5 | 0.0 | |
| Guidance and counseling on transition to further education or employment | All | 44.3 | 46.9 | 23.61*** | 56.6 | 17.0 | 25.06*** |
| | Most | 32.4 | 16.9 | (.21) | 20.4 | 35.7 | (.37) |
| | Some | 22.3 | 30.8 | | 21.0 | 30.9 | |
| | None | 1.1 | 5.4 | | 2.0 | 16.3 | |

[a]Weighted n = 3854; unweighted n = 465
[b]Weighted n = 3143; unweighted n = 138
[c]Weighted n = 471; unweighted n = 180
[d]Weighted n = 106; unweighted n = 31
** $p < .01$
*** $p < .001$

54% of districts spending Perkins' funds assessed the vocational interests, abilities and special needs of all academically disadvantaged students, with another 26% offering these assessments to most academically disadvantaged students, making a total of 80% providing assessment to all or most students. In comparison, 69% of districts not spending disadvantaged funds offered assessments to all (49%) or most (21%) academically disadvantaged students. Similarly, 82% of districts spending Perkins' disadvantaged funds offered guidance, counseling and career development activities to all or most academically disadvantaged students, compared with 72% of districts not spending these Perkins' funds.

Districts spending Perkins' disadvantaged funds were more likely to offer academically disadvantaged students remedial basic skills instruction in vocational classes, while more districts not spending these funds offered basic skills remediation in nonvocational classes. For example, in districts spending Perkins' disadvantaged funds, 59% offered remedial basic skills instruction in vocational classes to all or most academically disadvantaged students, compared with only 42% of districts not spending these funds. In contrast, 64% of districts not spending disadvantaged funds offered remedial basic skills instruction to all or most academically disadvantaged students in nonvocational classes, while 54% of districts spending these Perkins' funds provided remediation to all or most students in this setting.

Area Vocational Schools (AVS). Again, the actual number of AVS that did not spend Perkins' disadvantaged funds is quite small, yielding unreliable national estimates for this subgroup. However, we see a pattern of results similar to supplemental services for handicapped students -- that Perkins' funds seem to make a difference in the likelihood of assessment and counseling services. Among AVS spending Perkins' disadvantaged funds, 63% assessed the vocational interests, abilities and special needs of all academically disadvantaged students, compared with only 29% of AVS not spending disadvantaged funds. Similarly, 65% of AVS spending these federal dollars provided guidance, counseling and career development activities to all academically disadvantaged students, compared with only 20% of AVS not spending these funds. Guidance and counseling services on transition to further education or employment were provided to all academically disadvantaged students by 57% of AVS spending disadvantaged funds and 17% of those not spending these federal dollars.

AVS spending disadvantaged funds also were more likely to offer remedial basic skills instruction in vocational classes to all academically disadvantaged students than other AVS (36% versus 12%) and to modify the vocational curriculum for all academically disadvantaged students (20% versus 1%).

Economically Disadvantaged Sudents

Exhibit 5.7 presents the relationship between spending Perkins' disadvantaged funds and providing supplemental services to economically disadvantaged students. Districts and AVS with economically disadvantaged students enrolled in vocational education are included in the analysis; the small proportion of districts (11%) and AVS (4%) reporting no economically disadvantaged students enrolled in vocational education during 1986-87 skipped this section of the survey.

School Districts. Districts spending Perkins' disadvantaged funds were more likely to assess all or most economically disadvantaged students than districts without these funds. For example, 72% of districts spending these funds assessed the vocational interests, abilities and special needs of all or most economically disadvantaged students, compared with 60% of districts not spending these federal monies. In addition, 80% of districts spending disadvantaged funds offered guidance, counseling and career development activities to all or most economically disadvantaged students, compared with 67% of districts without these funds.

A greater proportion (53%) of districts spending Perkins' disadvantaged funds offered paid employment opportunities such as cooperative education to at least some economically disadvantaged students (i.e., "all", "most" or "some"), compared with districts not spending these federal dollars (35%). In addition, districts with Perkins' disadvantaged funds more often provided a stipend or subsidized employment to economically disadvantaged students (38% versus 27%).

Area Vocational Schools (AVS). Although a small sample size affects the reliability of these data, two high correlations (measures of association of .40) suggest that more AVS spending Perkins' disadvantaged funds offered guidance and counseling services to a greater percentage of economically disadvantaged students than did AVS without these federal dollars. For

Exhibit 5.7

National Estimates of Relationship Between Supplemental Services for Economically Disadvantaged Vocational Students and Spending Perkins' Disadvantaged Funds in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts | | | Percent of AVS | | |
|---|---|---|---|---|---|---|---|
| | | Spending Disadv. Funds[a] | Not Spending Disadv. Funds[b] | $X^2$ Statistic (Measure of Association) | Spending Disadv. Funds[c] | Not Spending Disadv. Funds[d] | $X^2$ Statistic (Measure of Association) |
| Assessment of vocational interests, abilities and special needs | All | 43.1 | 42.1 | 16.86*** | 50.7 | 25.4 | 8.37* |
| | Most | 29.2 | 18.3 | (.18) | 21.9 | 29.2 | (.21) |
| | Some | 24.5 | 29.7 | | 26.0 | 45.4 | |
| | None | 3.2 | 9.9 | | 1.4 | 0.0 | |
| A summer job combined with vocational education | All | 2.9 | 6.0 | 3.24 | 1.0 | 0.0 | 3.61 |
| | Most | 7.7 | 6.7 | (.08) | 17.7 | 5.8 | (.14) |
| | Some | 42.2 | 39.2 | | 45.1 | 47.5 | |
| | None | 47.2 | 48.1 | | 36.3 | 46.6 | |
| Paid employment through a school-coordinated program (e.g., cooperative vocational education) | All | 1.5 | 6.5 | 32.59*** | 0.7 | 0.0 | 12.95** |
| | Most | 7.2 | 3.0 | (.25) | 9.2 | 2.2 | (.26) |
| | Some | 44.4 | 25.9 | | 66.3 | 43.4 | |
| | None | 46.9 | 64.7 | | 23.8 | 54.4 | |
| A stipend or subsidized employment in conjunction with vocational education (e.g., work-study program) | All | 2.2 | 5.4 | 16.60*** | 0.3 | 0.0 | 5.51 |
| | Most | 2.9 | 2.8 | (.18) | 6.1 | 2.9 | (.17) |
| | Some | 33.0 | 18.4 | | 48.4 | 29.6 | |
| | None | 61.9 | 73.3 | | 45.2 | 67.5 | |

Continued

Exhibit 5.7
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts: Spending Disadv. Funds[a] | Percent of Districts: Not Spending Disadv. Funds[b] | Percent of Districts: $x^2$ Statistic (Measure of Association) | Percent of AVS: Spending Disadv. Funds[c] | Percent of AVS: Not Spending Disadv. Funds[d] | Percent of AVS: $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|
| Modification of curriculum to accommodate a job during school hours | All | 3.2 | 6.8 | 4.50 | 3.6 | 0.0 | 10.96* |
| | Most | 7.6 | 6.2 | (.09) | 19.3 | 0.0 | (.24) |
| | Some | 42.4 | 37.9 | | 48.0 | 51.1 | |
| | None | 46.8 | 49.0 | | 29.1 | 48.9 | |
| Guidance, counseling and career development activities | All | 53.8 | 44.6 | 13.17** | 65.3 | 18.1 | 29.89*** |
| | Most | 25.1 | 22.0 | (.16) | 22.2 | 38.5 | (.40) |
| | Some | 20.1 | 28.7 | | 11.6 | 43.5 | |
| | None | 0.9 | 4.6 | | 0.9 | 0.0 | |
| Guidance and counseling on transition to further education or employment | All | 42.6 | 39.0 | 10.36* | 53.6 | 15.2 | 29.53*** |
| | Most | 28.2 | 20.3 | (.14) | 27.7 | 35.9 | (.40) |
| | Some | 27.7 | 36.5 | | 17.6 | 32.2 | |
| | None | 1.4 | 4.2 | | 1.1 | 16.7 | |

[a]Weighted n = 3716; unweighted n = 445
[b]Weighted n = 3300; unweighted n = 138
[c]Weighted n = 482; unweighted n = 182
[d]Weighted n = 104; unweighted n = 29
* p <.05
** p <.01
*** p <.001

example, an estimated 65% of AVS spending disadvantaged funds offered guidance, counseling and career development activities to all economically disadvantaged students, as compared with only 18% of AVS not spending these Perkins' funds. Similarly, 54% of AVS spending Perkins' disadvantaged funds offered guidance and counseling on transition to further education and employment to all economically disadvantaged students, compared with 15% of institutions without these funds.

Moderate statistical relationships also suggest that more AVS spending disadvantaged funds (76%) offered paid employment to at least some economically disadvantaged students than did AVS without these funds (46%). In addition, more AVS spending federal dollars for disadvantaged students modified their curriculum to accomodate a job during school hours (71% versus 51%).

Limited-English-Proficient (LEP) Students

Exhibit 5.8 presents the relationship between spending Perkins' LEP funds and providing supplemental services to limited-English-proficient students. This analysis focuses on the small proportion of districts (18%) and AVS (26%) with limited-English-proficient students enrolled in vocational education during 1986-87. The number of respondents is further reduced by dividing each sample into those spending and not spending LEP funds. For example, there are approximately 130 school districts in each category of spending versus not spending LEP funds; for AVS, there are 24-35 schools in each subgroup. Since these small samples do not yield reliable national estimate, these results should be interpreted with caution.

School Districts. There are statistically significant differences in the proportion of LEP students receiving guidance and assessment services according to whether the district spent Perkins' funds for LEP. However, the differences are simply in the proportion of districts offering these supplemental services to "all" versus "most" of the LEP students. For example, 70% of districts not spending LEP funds offered guidance, counseling and career development activities to all LEP students, compared with 36% of districts spending these federal dollars. However, 41% of districts spending LEP funds offered these guidance services to most LEP students, compared with only 13% of districts not spending federal dollars. When the percentages for "all" and

Exhibit 5.8

National Estimates of Relationship Between Supplemental Services for Limited-English-Proficient (LEP) Vocational Students and Spending Perkins' LEP Funds in School Districts and Secondary Area Vocational Schools (AVS)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts: Spending LEP Funds[a] | Percent of Districts: Not Spending LEP Funds[b] | Percent of Districts: $x^2$ Statistic (Measure of Association) | Percent of AVS: Spending LEP Funds[c] | Percent of AVS: Not Spending LEP Funds[d] | Percent of AVS: $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|
| Vocational tutoring or assistance by native speaker outside of regular class | All | 18.4 | 15.3 | 7.27 | 47.7 | 22.7 | 5.62 |
| | Most | 15.8 | 9.5 | (.26) | 5.6 | 17.7 | (.33) |
| | Some | 40.3 | 23.8 | | 27.5 | 21.6 | |
| | None | 25.6 | 51.5 | | 19.2 | 38.0 | |
| Assessment of vocational interests, abilities and special needs | All | 26.9 | 57.3 | 10.22* | 74.1 | 42.1 | 6.70 |
| | Most | 24.1 | 11.0 | (.30) | 9.3 | 8.2 | (.36) |
| | Some | 39.2 | 22.4 | | 13.8 | 37.0 | |
| | None | 9.8 | 9.2 | | 2.8 | 12.7 | |
| Modified vocational curriculum (e.g., technical manuals in native language) | All | 1.9 | 9.6 | 10.45* | 14.1 | 3.3 | 9.09* |
| | Most | 20.1 | 6.8 | (.31) | 35.0 | 16.1 | (.42) |
| | Some | 33.1 | 17.8 | | 25.9 | 14.1 | |
| | None | 44.8 | 65.8 | | 25.0 | 66.5 | |
| Guidance, counseling and career development activities | All | 36.4 | 70.3 | 16.14** | 54.2 | 43.8 | 1.73 |
| | Most | 41.4 | 12.8 | (.38) | 33.2 | 32.2 | (.18) |
| | Some | 15.6 | 15.6 | | 12.6 | 20.7 | |
| | None | 6.9 | 1.3 | | 0.0 | 3.3 | |

Continued

Exhibit 5.8
(continued)

| Type of Supplemental Service | Proportion of Students Receiving Service | Percent of Districts: Spending LEP Funds[a] | Percent of Districts: Not Spending LEP Funds[b] | Percent of Districts: $x^2$ Statistic (Measure of Association) | Percent of AVS: Spending LEP Funds[c] | Percent of AVS: Not Spending LEP Funds[d] | Percent of AVS: $x^2$ Statistic (Measure of Association) |
|---|---|---|---|---|---|---|---|
| Guidance and counseling on transition to further education or employment | All | 32.3 | 59.7 | 9.40* | 50.2 | 37.4 | 1.77 |
| | Most | 37.1 | 15.0 | (.29) | 29.3 | 39.1 | (.19) |
| | Some | 25.1 | 20.4 | | 20.5 | 20.2 | |
| | None | 5.5 | 4.9 | | 0.0 | 3.3 | |
| Bilingual basic skills instruction | All | 39.3 | 40.8 | 7.03 | 23.8 | 12.6 | 10.24* |
| | Most | 10.2 | 18.0 | (.25) | 6.7 | 32.2 | (.45) |
| | Some | 33.9 | 13.9 | | 50.4 | 18.7 | |
| | None | 16.6 | 27.3 | | 19.2 | 36.4 | |

[a]Weighted n = 520; unweighted n = 113
[b]Weighted n = 991; unweighted n = 128
[c]Weighted n = 89; unweighted n = 24
[d]Weighted n = 70; unweighted n = 35
* $p < .05$

"most" are added together, the differences between the two groups are less meaningful (78% of districts spending LEP funds versus 83% of other districts).

Districts spending LEP funds were more likely to adapt vocational curriculum for at least some LEP students than were districts without these funds. Among districts spending these Perkins' monies, 55% adapted the curriculum for all, most or some LEP students, compared with 34% of districts that did not spend these federal dollars.

Area Vocational Schools (AVS). Given the small sample sizes in the two subgroups, there are few statistically significant differences between AVS spending LEP funds and those not spending these monies. The only significant results are for (a) modified vocational curriculum, where 75% of AVS spending funds provided this help for at least some students, compared with 33% of other institutions; and (b) bilingual basic skills instruction, where 81% of AVS spending LEP funds and 64% of AVS without these funds offered this remediation to at least some LEP students.

### 5.4 Supplemental Services and Size of Perkins' Expenditure

Among districts and AVS reporting Perkins' expenditures, there are no statistically significant relationships between the size of these expenditures and the likelihood of offering supplemental services to a greater proportion of students. In these analyses, the amount of Perkins' funds spent in a particular Title IIA cateogory was averaged across those districts or AVS that offered supplemental services to "all", "most", "some" or "none" of the targeted students. Analyses were conducted separately for districts and AVS spending Perkins' funds for handicapped, disadvantaged, and LEP students. For example, the amount of handicapped funds spent by districts was averaged across each of the four classifications of service provision. Analyses of variance were used to compare the average amount of funds spent by districts offering a particular type of supplemental service to "all" versus "most" versus "some" versus "none" of their handicapped students.

The lack of statistically significant results indicates that districts offering supplemental services, such as assessments or modified equipment, to all students are just as likely to report a large as a small expenditure of Perkins' handicapped funds. Similarly, districts offering

supplemental services to none of their handicapped students in vocational programs may have spent a large or small amount of Perkins' handicapped funds during the 1986-87 school year. The lack of a relationship between size of expenditure and proportion of students receiving supplemental services held up across districts and AVS, for services to handicapped, academically disadvantaged, economically disadvantaged and LEP students.

## 5.5 Supplemental Services and School and District Size

Among districts and AVS spending Perkins' handicapped or disadvantaged funds, there are no statistically significant relationships between the provision of supplemental services and school or district size. In other words, small districts that reported spending handicapped funds during 1986-87 were just as likely to offer each type of supplemental service to all handicapped students as large districts. Similarly, large districts were as likely as small districts to offer supplemental services to none of their handicapped students. The lack of consistent differences based on size held up for districts and AVS across the four categories of special populations and for all supplemental services investigated.

## 5.6 Summary and Conclusions

In this section we summarize the survey results regarding supplemental services to handicapped and disadvantaged students and highlight the key findings. Additional details can be found in the discussion and exhibits presented earlier in this chapter.

- **Approximately half of all districts and AVS provided counseling and assessment services to all handicapped and disadvantaged students.**

These survey results suggest that the intent of Section 204 of the Perkins Act, to provide assessment and counseling to all handicapped and disadvantaged students, is not being implemented in all secondary vocational settings. During 1986-87, approximately 40-50% of districts and AVS provided assessment, counseling and career development activities to all disadvantaged students. A higher percentage (58-68%) provided these supplemental services to all handicapped students. Another 20% of respondents provided assessment and counseling services to "most" handicapped and disadvantaged students,

leaving 20-30% of districts and AVS that offered these services to "some" or "none" of their handicapped and disadvantaged students.

There are few statistically significant differences between AVS and school districts in the likelihood of providing assessment and counseling services. Even though most AVS are not full-day schools, these supplemental services seem to be as prevalent as in school districts.

- **Other types of supplemental services, such as modified curriculum or remedial basic skills instruction, were generally not offered to all handicapped and disadvantaged students.**

Less than 10% of districts and less than 20% of AVS provided a modified curriculum to all academically disadvantaged students or LEP students. Approximately one third of districts and AVS adapted the vocational curriculum for handicapped students. However, it is impossible to determine how many students need these services in order to successfully complete a vocational program. Unlike assessment, counseling and career development activities, which would benefit all students, modified curriculum and remediation may not be necessary for all handicapped or disadvantaged students.

- **Area vocational schools were more likely than districts to provide other types of supplemental services, such as stipends or paid employment for economically disadvantaged students or modified curriculum to academically disadvantaged students.**

While few AVS or districts provided financial compensation to all economically disadvantaged students, approximately half of the AVS gave at least some economically disadvantaged students a stipend or subsidized employment, compared with approximately 30% of districts. In addition, 70% of AVS and 45% of districts offered paid employment to at least some students through a school-coordinated program. Similarly, more than 85% of AVS modified the vocational curriculum for at least some academically disadvantaged students, compared with only 60% of districts.

- **School districts receiving Perkins' handicapped funds were more likely to provide high-cost supplemental services such as modified facilities and equipment for handicapped students than were districts without these federal funds.**

Approximately 72% of districts reporting Perkins' handicapped expenditures during 1986-87 indicated that they provided adapted or simplified equipment for at least some handicapped students, compared with 57% of districts not spending these funds.

- **Although the number of AVS that did not spend handicapped or disadvantaged funds was small, these institutions were less likely to provide assessment and counseling services than AVS with these funds.**

Approximately 70% of AVS spending handicapped funds provided assessment, counseling and career development activities to all handicapped students, as compared with 30-40% of AVS without these funds. Similarly, approximately 65% of AVS spending disadvantaged funds provided assessment and counseling services to all academically disadvantaged students, as compared with 20-30% of institutions without these federal dollars.

- **The size of the district or AVS was not related to the likelihood of providing supplemental services to a greater proportion of students.**

Small districts spending Perkins' funding were just as likely as large districts to provide supplemental services to all handicapped and disadvantaged students. Similarly, there was an equal likelihood that large and small districts provided supplemental services to few handicapped and disadvantaged students.

## 6.0 CHANGES IN STUDENT ENROLLMENTS IN VOCATIONAL EDUCATION 1982-83 TO 1986-87

### 6.1 Introduction

In addition to investigating the effects of the Perkins' Act, a secondary goal of the National Assessment of Vocational Education and this study is to explore the status of and changes in vocational education over the last five years. To obtain national data on changes in vocational enrollments during that time period, we included a series of questions on both surveys about vocational enrollment patterns in general as well as in specific program areas. In this chapter, we describe the enrollment shifts in vocational programs in school districts, secondary AVS and postsecondary institutions. In addition, we describe the changes in the proportion of handicapped and disadvantaged students in vocational programs. For all questions, respondents were asked to focus on changes between the 1982-83 and 1986-87 school years.

During the five-year time period under investigation, a number of changes in American public education took place as part of the education reform movement. In reaction to reports critical of American education, such as A Nation at Risk, educators and legislators in a number of states took action to increase the rigor and accountability of public education. Widespread changes included increased course requirements and minimum competency testing for high school graduation. Many vocational educators have expressed concern that these reforms have had a negative impact on vocational education. As students are required to take additional courses to graduate from high school, there is less time left for vocational education.

Concern also has been raised about the changing population of students enrolled in vocational programs, with an increase in handicapped and disadvantaged students requiring additional support services. We begin this chapter by presenting information on enrollment changes among these special populations.

### 6.2 Changes in Handicapped and Disadvantaged Enrollments

Respondents were asked whether the number of handicapped and disadvantaged students in vocational education had changed over the past five years

(1982-83 through 1986-87). The response options categorized change in proportional terms on a five-point scale:

- large decrease (greater than 20%)
- moderate decrease (11-20%)
- no or minimal change (±10%)
- moderate increase (11-20%)
- large increase (greater than 20%)

The data from school districts, secondary AVS and postsecondary institutions are summarized in Exhibit 6.1.

Handicapped Students

The majority (63%) of districts reported minimal changes (± 10%) in handicapped enrollments over the past five years. In fact, 10% indicated a moderate decrease (11-20%) in the number of handicapped students enrolled in vocational education. The majority of postsecondary institutions (63%) also reported minimal changes in handicapped enrollments. In contrast, nearly half of secondary area vocational schools (47%) have seen moderate increases (11-20%) in handicapped enrollments.

There is no precise way of knowing from the survey data whether the increases in handicapped enrollments at AVS are connected to the decreases in school districts. In other words, are handicapped students increasingly more likely to attend an AVS for vocational programs than to remain in the school district? While no causal links can be made from these data, area vocational schools, by definition, accept students from a number of school districts. In this way, each AVS has a direct link to some number of school districts. Thus, if the number of handicapped students per se is not increasing, it is plausible to suggest that increases seen at AVS may be related to decreases in school districts.

Another question of interest is whether increases in handicapped enrollments reflect an overall increase in vocational enrollments. Exhibit 6.2 presents the relationship between changes in vocational enrollments and changes in handicapped enrollments.

Exhibit 6.1

National Estimates of Changes in Handicapped and Disadvantaged Enrollments in Vocational Education 1982-83 to 1986-87

| Enrollment Changes | Percent of District/Institution: School District | Secondary AVS | Postsecondary Institution | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| **Handicapped students** | | | | |
| Large decrease (> 20%) | 0.3 | 0.7 | 0.9 | 103.47*** (.21) |
| Moderate decrease (11-20%) | 9.8 | 2.1 | 0.5 | |
| No or minimal change (±10%) | 63.3 | 39.4 | 63.2 | |
| Moderate increase (11-20%) | 21.7 | 47.4 | 27.6 | |
| Large increase (> 20%) | 4.9 | 10.4 | 7.7 | |
| Weighted n: | 8700 | 685 | 1381 | |
| Weighted n: | 689 | 238 | 325 | |
| **Disadvantaged students** | | | | |
| Large decrease (> 20%) | 0.3 | 2.4 | 1.3 | 135.03*** (.24) |
| Moderate decrease (11-20%) | 11.8 | 4.6 | 1.2 | |
| No or minimal change (±10%) | 55.6 | 32.4 | 35.0 | |
| Moderate increase (11-20%) | 27.9 | 48.6 | 48.1 | |
| Large increase (> 20%) | 4.4 | 12.0 | 14.4 | |
| Weighted n: | 8674 | 673 | 1380 | |
| Unweighted n: | 686 | 236 | 327 | |

Exhibit 6.2

Relationship Between Vocational Enrollment and Handicapped Enrollment Patterns

| Type of District/ Institution | Handicapped Enrollment Patterns | Total Vocational Enrollment | | | $X^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|
| | | % Decrease | % No Change | % Increase | |
| School district | Moderate to large decreases (> 11%) | 22.9 | 5.8 | 0.0 | |
| (Weighted n = 8676) (Unweighted n = 688) | No or minimal change (± 10%) | 51.1 | 78.8 | 55.7 | 104.37*** (.29) |
| | Moderate to large increases (> 11%) | 25.9 | 15.4 | 44.3 | |
| Secondary area vocational school | Moderate to large decreases (> 11%) | 6.3 | 1.3 | 0.0 | |
| (Weighted n = 673) (Unweighted n = 236) | No or minimal change (± 10%) | 35.1 | 56.3 | 27.9 | 18.12** (.21) |
| | Moderate to large increases (> 11%) | 58.7 | 42.4 | 72.1 | |
| Postsecondary institution | Moderate to large decreases (> 11%) | 2.4 | 2.3 | 0.0 | |
| (Weighted n = 1376) (Unweighted n = 324) | No or minimal change (± 10%) | 65.2 | 80.8 | 46.5 | 33.49*** (.23) |
| | Moderate to large increases (> 11%) | 32.5 | 16.9 | 53.5 | |

** p<.01
*** p<.001

As the significant chi-square values indicate, there is a moderately strong relationship between the enrollment pattern of handicapped students and overall vocational enrollments. In other words, where there were decreases in overall vocational enrollments, there also tended to be decreases in handicapped student enrollments. However, in some cases, districts or institutions with a decrease or no change in overall enrollments reported an increase in handicapped enrollments. This was particularly true at secondary AVS, where 59% of the schools that reported an overall decrease in vocational enrollment also reported an increase in handicapped enrollments. In school districts and postsecondary institutions, approximately 30% of respondents reported a decrease in overall vocational enrollments and an increase in handicapped enrollments.

Disadvantaged Students

More than half of all school districts reported no or minimal change in the number of disadvantaged students enrolled in vocational education (Exhibit 6.1). Approximately one third have seen an increase of more than 10%. As with handicapped students, approximately 10% of districts have seen moderate decreases over the last five years in the number of disadvantaged students in vocational education.

In contrast, the majority of secondary AVS and postsecondary institutions reported an increase in the number of disadvantaged students in vocational education over the last five years. Approximately 48% indicated moderate increases, while 12-14% responded that disadvantaged enrollments have increased more than 20%.

As shown in Exhibit 6.3, there are moderate correlations between disadvantaged enrollment patterns and overall vocational enrollments. In particular, 83% of AVS and 82% of postsecondary institutions reporting an increase in vocational enrollments also reported an increase in the number of disadvantaged students in vocational education. However, more than half of the AVS and postsecondary institutions with declining vocational enrollments reported an increase in the number of disadvantaged students.

In school districts, the pattern was slightly different. A smaller proportion of school districts with an increase in vocational enrollments also reported an upswing in disadvantaged student enrollments (57%), with 42% of

Exhibit 6.3

Relationship Between Vocational Enrollment and Disadvantaged Enrollment Patterns

| Type of District/ Institution | Disadvantaged Enrollment Patterns | Total Vocational Enrollment | | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|
| | | % Decrease | % No Change | % Increase | |
| School district | Moderate to large decreases (> 11%) | 28.6 | 5.6 | 1.5 | |
| (Weighted n = 8674) (Unweighted n = 686) | No or minimal change (± 10%) | 40.8 | 76.7 | 42.0 | 158.10*** (.35) |
| | Moderate to large increases (> 11%) | 30.6 | 17.7 | 57.3 | |
| Secondary area vocational school | Moderate to large decreases (> 11%) | 14.2 | 1.9 | 2.4 | |
| (Weighted n = 673) (Unweighted n = 236) | No or minimal change (± 10%) | 33.5 | 53.4 | 14.7 | 34.94*** (.28) |
| | Moderate to large increases (> 11%) | 52.4 | 44.7 | 82.9 | |
| Postsecondary institution | Moderate to large decreases (> 11%) | 2.4 | 1.9 | 3.1 | |
| (Weighted n = 1373) (Unweighted n = 325) | No or minimal change (± 10%) | 36.1 | 58.3 | 14.7 | 45.04*** (.26) |
| | Moderate to large increases (> 11%) | 61.5 | 39.8 | 82.3 | |

*** p<.001

districts indicating that overall vocational enrollments had gone up while disadvantaged enrollments held steady.

## 6.3 Changes in Total Vocational Enrollments

### Percentage Change in Enrollment

Exhibit 6.4 presents the proportional change in total vocational enrollments since 1982-83 across the three types of vocational providers. There are two general findings that emerge. First, enrollment in vocational education at school districts was more likely to have held stable over the last five years than at secondary AVS or postsecondary institutions. Among districts, 40% reported enrollment shifts of less than 10%. In contrast, only 26% of AVS and 30% of postsecondary institutions reported no or minimal change.

The second finding of note is that approximately 30% of school districts, secondary AVS and postsecondary institutions have seen decreases of 11-20% in vocational enrollments. These results suggest that while the number of handicapped and disadvantaged students is holding steady or increasing in vocational education, overall vocational enrollments are more likely to have declined. This is particularly the case at AVS and postsecondary institutions, where fewer than 7% reported a decline in handicapped or disadvantaged enrollments.

### Changes in Vocational Enrollments Relative to Overall Enrollment Changes

Exhibit 6.5 displays the average change in overall district or institution enrollments for each category of change in vocational enrollments. In all three vocational settings, the pattern of vocational enrollments mirrors overall enrollments between 1982-83 and 1986-87. For example, postsecondary institutions with moderate to large decreases in vocational enrollments averaged overall enrollment declines of 4%; those with increases in vocational enrollments also had an upswing in overall enrollments, averaging 17%. In school districts, the average enrollment changes were less extreme, but the direction of vocational enrollments still matched that of overall enrollments.

Exhibit 6.4

National Estimates of Changes in Overall
Vocational Enrollments 1982-83 to 1986-87

| Vocational Enrollment Changes | Percent of District/Institution | | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | School Districts | Secondary AVS | Postsecondary Institution | |
| Large decrease (> 20%) | 5.3 | 7.7 | 7.5 | 41.74*** (.13) |
| Moderate decrease (11-20%) | 28.9 | 31.2 | 26.4 | |
| No or minimal change (± 10%) | 40.4 | 26.3 | 30.4 | |
| Moderate increase (11-20%) | 22.5 | 26.3 | 24.7 | |
| Large increase (> 20%) | 3.0 | 8.5 | 11.0 | |
| Weighted n: | 8729 | 682 | 1417 | |
| Unweighted n: | 694 | 238 | 338 | |

*** $p < .001$

Exhibit 6.5

Relationship between Total District/Institution Enrollment Changes and Vocational Enrollment Patterns

| Type of District/ Institution | Vocational Enrollment Patterns | Average Enrollment Change in District/Institution | F Statistic of Group Differences |
|---|---|---|---|
| School district | Moderate to large decreases (> 11%) | -5% | 11.93*** |
| (Weighted n = 8219) (Unweighted n = 632) | No or minimal change (±10%) | -1% | |
| | Moderate to large increases (> 11%) | +2% | |
| Secondary area vocational school | Moderate to large decreases (> 11%) | -12% | 12.90*** |
| (Weighted n = 530) (Unweighted n = 189) | No or minimal change (±10%) | +7% | |
| | Moderate to large increases (> 11%) | +32% | |
| Postsecondary institution | Moderate to large decreases (> 11%) | -4% | 6.69** |
| (Weighted n =1197) (Unweighted n = 288) | No or minimal change (±10%) | +4% | |
| | Moderate to large increases (> 11%) | +17% | |

** p <.01
*** p <.001

Secondary AVS that indicated moderate to large increases in vocational enrollments averaged overall enrollment increases of 32% between 1982-86, while AVS with decreases in vocational enrollments saw overall declines of 12%. Of course, we would expect a strong relationship between these two variables since "overall" enrollment at AVS is the same as vocational enrollment.

These results indicate that, on average, vocational enrollments reflect general enrollment patterns at secondary and postsecondary institutions, and that where vocational enrollments have decreased, overall student enrollments also have gone down.

Reasons for Enrollment Changes at Postsecondary Institutions

Respondents indicating moderate or large change in overall vocational enrollments were asked to rate how strongly a number of factors related to these changes. Exhibit 6.6 presents the factors relating to increases in enrollment; Exhibit 6.7 presents the factors relating to enrollment declines.

The three factors were rated by a majority of postsecondary institutions as either strongly or somewhat related to an increase in vocational enrollments: an increase in student interest, overall increase in institution enrollments and increase in recruitment. There also seemed to be a consensus that changes in state or institutional policies towards vocational education were not strongly related to student enrollment patterns. Respondents were split on the relevance to enrollment increases of factors such as local economic growth, increase in unemployment, increase in employment and training funds, and increase in available student aid, with a similar percentage of respondents indicating these factors were not related as were related to enrollment increases.

Among institutions with declines in vocational enrollments, more than half cited decreases in the number of students coming directly from high school and overall decreases in institution enrollments as strongly related to these declines (Exhibit 6.7). A majority of institutions indicated that decline in student interest and an increase in unemployment were not related to downward shifts in vocational enrollments. Respondents were split on whether local economic growth or a decrease in available student aid were

Exhibit 6.6

Reasons Related to Increases in Overall
Vocational Enrollments at Postsecondary Institutions

| Reason Related to Increase in Vocational Enrollment | Percent of Institutions[a] | | |
|---|---|---|---|
| | Strongly Related | Somewhat Related | Not Related |
| Increase in student interest in vocational education | 47.0 | 48.8 | 4.2 |
| Overall increase in institution enrollments | 38.8 | 36.8 | 24.4 |
| Increased recruitment activities | 36.5 | 57.8 | 5.6 |
| Increase in unemployment | 28.9 | 34.9 | 36.2 |
| Increase in employment and training funds | 27.8 | 42.9 | 29.3 |
| Local economic growth | 25.4 | 44.3 | 30.2 |
| Increase in available student financial aid | 20.0 | 46.7 | 33.2 |
| Change in state policy towards vocational education | 9.7 | 23.0 | 67.3 |
| Change in institutional policy towards vocational education | 9.5 | 30.1 | 60.4 |

[a]Weighted n = 462; unweighted n = 110

Exhibit 6.7

Reasons Related to Decreases in Overall
Vocational Enrollments at Postsecondary Institutions

| Reason Related to Decrease in Vocational Enrollment | Percent of Institutions[a] | | |
|---|---|---|---|
| | Strongly Related | Somewhat Related | Not Related |
| Decrease in number of students coming directly from high school | 54.2 | 36.1 | 9.7 |
| Overall decrease in institution enrollments | 50.1 | 19.5 | 30.4 |
| Local economic growth | 32.5 | 45.5 | 22.0 |
| Decrease in available student aid | 21.3 | 35.0 | 43.6 |
| Decline in student interest in vocational education | 20.4 | 22.3 | 57.4 |
| Increase in unemployment | 15.8 | 29.4 | 54.8 |
| Change in state policy towards vocational education | 2.2 | 13.5 | 84.3 |
| Change in institutional policy towards vocational education | 2.2 | 4.3 | 93.5 |

[a]Weighted n = 392; unweighted n = 75

related to decreases in vocational enrollments. Again, state and institutional policies seemed to have little relationship to vocational enrollments at the postsecondary level.

Reasons for Secondary Vocational Enrollment Declines

Exhibit 6.8 displays the factors related to vocational enrollment declines in school districts and secondary AVS. Only those respondents with enrollment declines of 11% or more rated these factors. Thus, all percentages refer to the subset of respondents with enrollment declines that chose a particular factor.

Two of the reasons given most often as strongly related to decreases in vocational enrollments concern high school graduation requirements. Nearly 70% of respondents from AVS and nearly half of those from school districts felt that enrollment declines were strongly related to increases in core course requirements for graduation; 40-50% of respondents cited increases in other graduation requirements as negatively affecting vocational enrollments. These results support the general concern that as graduation requirements become more stringent, vocational education becomes a less viable option for students. These increased graduation requirements appear to be more strongly felt by AVS than by school districts.

Using information about graduation requirements obtained from the survey, we explored the relationship between actual changes in graduation requirements since 1982 and perceived effects on vocational enrollments in school districts. This analysis, presented in Exhibit 6.9, suggests that districts with increases in graduation requirements in math, science and social studies were more likely to indicate that increases in core course requirements were strongly related to enrollment declines than were districts that decreased or did not change graduation requirements. In other words, the ratings of increased graduation requirements as a factor affecting enrollment declines seem to be consistent with actual changes in core course requirements.

The relationship between ratings of perceived impact and actual graduation requirements was strongest for increases in the number of math and science courses required for graduation. For example, 58% of districts with increased science requirements felt that increased graduation requirements

Exhibit 6.8

Reasons Related to Decreases in Overall Vocational Enrollments in School Districts and Secondary Area Vocational Schools (AVS)

| Reasons Related to Decrease in Vocational Enrollment | Strongly Related | | Somewhat Related | | Not Related | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|---|---|
| | % Districts[a] | % AVS[b] | % Districts | % AVS | % Districts | % AVS | |
| Increase in core course requirements for graduation | 46.4 | 67.7 | 37.1 | 22.4 | 16.5 | 9.9 | 11.11** (.20) |
| Increase in other graduation requirements | 40.8 | 53.3 | 35.8 | 31.8 | 24.1 | 14.9 | 4.73 (.13) |
| Overall decrease in district enrollments | 37.7 | 46.3 | 30.7 | 39.6 | 31.6 | 14.2 | 9.52** (.18) |
| Reduced support or guidance from district administration | 2.5 | 20.0 | 15.9 | 19.1 | 81.5 | 61.0 | 27.80*** (.31) |
| Decline in student interest in vocational education | 11.1 | 2.2 | 44.4 | 49.1 | 44.5 | 48.7 | 6.28* (.15) |
| Academic diploma/certificate in addition to standard diploma | 8.0 | 10.2 | 9.7 | 15.6 | 82.2 | 74.2 | 2.64 (.10) |
| Less parental support for vocational education | 7.5 | 6.3 | 39.8 | 53.6 | 52.7 | 40.1 | 4.76 (.13) |
| Minimum competency test for graduation | 5.6 | 7.4 | 14.5 | 30.9 | 79.9 | 61.7 | 11.55** (.20) |
| Shortened school day | 1.1 | 9.5 | 3.2 | 8.2 | 95.7 | 82.3 | 16.31*** (.24) |
| Declining job placement rate | 6.4 | 0.5 | 24.1 | 23.7 | 69.6 | 75.8 | 4.99 (.13) |

[a]Weighted n = 2793; unweighted n = 287

[b]Weighted n = 271; unweighted n = 126

* $p < .05$

** $p < .01$

Exhibit 6.9

Actual Changes in District Graduation Requirements in Relation to Citing This as a Reason for Declines in Vocational Enrollments

| Subject Area | Relationship Cited Between Graduation Requirement and Declines | Actual Changes in Graduation Requirements 1982-83 to 1986-87 | | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|
| | | % Decrease or No Change | % Increase | |
| English | Strongly related | 39.3 | 56.1 | 4.63 |
| | Somewhat related | 39.0 | 40.7 | (.16) |
| | Not related | 21.7 | 3.2 | |
| | Weighted n: | 2077 | 293 | |
| | Unweighted n: | 184 | 44 | |
| Math | Strongly related | 25.6 | 54.5 | 14.91*** |
| | Somewhat related | 50.0 | 30.2 | (.29) |
| | Not related | 24.4 | 15.3 | |
| | Weighted n: | 1077 | 1293 | |
| | Unweighted n: | 84 | 144 | |
| Science | Strongly related | 29.3 | 58.3 | 15.32*** |
| | Somewhat related | 45.5 | 30.4 | (.30) |
| | Not related | 25.2 | 11.3 | |
| | Weighted n: | 1383 | 987 | |
| | Unweighted n: | 125 | 103 | |
| Social studies | Strongly related | 33.9 | 50.5 | 11.07** |
| | Somewhat related | 38.0 | 40.6 | (.25) |
| | Not related | 28.1 | 8.9 | |
| | Weighted n: | 1301 | 1069 | |
| | Unweighted n: | 148 | 80 | |

** $p<.01$
*** $p<.001$

were strongly related to decreases in vocational enrollments. Another 30% of districts with increases in science requirements felt this was somewhat related to decreases in vocational enrollments. Of districts with increases in math requirements, 55% rated increased graduation requirements as strongly related, and 30% rated them as somewhat related to vocational enrollment declines.

Approximately half of the districts with increases in the number of social studies courses required for graduation felt that increased graduation requirements were strongly related to vocational enrollment declines, and 41% indicated they were somewhat related.

Few districts increased English requirements for graduation. Of this group, 56% felt these changes were strongly related to vocational enrollment declines. However, 39% of districts without increases also rated increased graduation requirements as strongly related to enrollment declines. Based on these estimates, it does not appear that changes in the number of English courses required for graduation have negatively affected vocational enrollments.

While course requirements for graduation seem to be related to decreases in vocational enrollments, other changes brought on by the academic reform movement were cited less frequently by school districts as strongly related to declines in enrollment. However, AVS seem more strongly affected than school districts. For example, as Exhibit 6.8 shows, 20% of school districts indicated that minimum competency tests were related to enrollment declines. In contrast, 38% of AVS felt that the tests had some relationship to vocational enrollments. Few districts (4%) felt that a shortened school day had any relationship to enrollment shifts, while 18% of AVS felt that this was a factor. Both of these differences are statistically significant.

Forty percent of AVS with enrollment declines attributed these decreases to reduced support or guidance from district administration, with 20% seeing a strong connection. In contrast, only 3% of respondents from school districts felt that this was strongly related, and 16% felt it was somewhat related. Since AVS are dependent on students coming to the area school from a sending district, the impact of support and guidance at the district level may be more important and more noticeable than at school districts where students themselves may be more aware of options in vocational

education. However, 47% of districts and 60% of AVS indicated that less parental support for vocational education was related to vocational enrollment declines.

## 6.4 Enrollment Changes in Vocational Programs

Survey respondents were asked to categorize overall enrollment patterns in seven vocational programs as having increased, decreased or remained unchanged since the 1982-83 academic year. A fourth response option was that the program had not been offered in the last five years. The results, summarized in Exhibit 6.10, are for those districts and institutions that offer courses in a particular program area; respondents that did not offer a particular program were excluded from the analysis.

Among school districts, enrollments in all program areas have remained relatively static over the past five years. In each program area, 40-50% of respondents indicated no change in student enrollments. For example, enrollments in business and office as well as technical programs remained unchanged in approximately 41-45% of districts. Student enrollments in health programs did not change between 1982-83 and 1986-87 in 58% of districts. In agriculture, home economics/consumer and homemaking, and trades and industry, enrollments remained unchanged in 41-47% of districts, but decreased in 34-36% of districts.

At AVS, enrollments in technical and marketing/distribution programs remained unchanged in 46-49% of schools. More than half (55%) of AVS offering vocational agriculture have seen a decrease in student enrollments since 1982. Enrollments in home economics have remained unchanged in 42% of AVS, but decreased in 33% of the schools offering these courses. Similarly, enrollment in trades and industry programs have remained unchanged in 35% of AVS, decreased in 36% and increased in 30% of AVS. Enrollments in business and office programs have decreased in nearly one third of AVS and increased in 45% of schools offering these programs.

In 47% of postsecondary institutions, as in secondary AVS, enrollments in vocational agriculture have decreased. Similarly, enrollment in trades and industry programs have decreased at 41% of postsecondary institutions. Enrollments in home economics programs have remained unchanged in 53% of institutions, increased in 23% and decreased in 24% of postsecondary

Exhibit 6.10

National Estimates of Enrollment Changes in Vocational Programs in School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions

| Vocational Program | Enrollment Change 1982-83 to 1986-87 | | Percent of District/Institution: School Districts | Secondary AVS | Postsecondary Institutions | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|---|
| Agriculture | Increase | | 24.4 | 6.7 | 27.1 | 33.29*** |
| | Decrease | | 33.8 | 55.2 | 47.1 | (.16) |
| | No Change | | 41.7 | 38.1 | 25.8 | |
| | | Weighted n: | 5998 | 375 | 424 | |
| | | Unweighted n: | 463 | 165 | 99 | |
| Business and office | Increase | | 29.2 | 44.8 | 55.5 | 54.09*** |
| | Decrease | | 30.1 | 32.1 | 21.3 | (.17) |
| | No Change | | 40.7 | 23.0 | 23.2 | |
| | | Weighted n: | 6667 | 633 | 859 | |
| | | Unweighted n: | 639 | 218 | 209 | |
| Health | Increase | | 21.2 | 29.5 | 46.0 | 53.64*** |
| | Decrease | | 20.9 | 31.8 | 29.3 | (.21) |
| | No Change | | 57.9 | 38.7 | 24.7 | |
| | | Weighted n: | 2912 | 590 | 849 | |
| | | Unweighted n: | 331 | 213 | 197 | |
| Home economics/ consumer and homemaking | Increase | | 19.3 | 24.8 | 23.0 | 5.50 |
| | Decrease | | 33.6 | 33.1 | 24.1 | (.06) |
| | No Change | | 47.1 | 42.1 | 53.0 | |
| | | Weighted n: | 8080 | 427 | 381 | |
| | | Unweighted n: | 668 | 165 | 101 | |
| Marketing/ distribution | Increase | | 25.7 | 27.7 | 33.9 | 9.66* |
| | Decrease | | 25.3 | 23.6 | 31.8 | (.10) |
| | No Change | | 49.0 | 48.7 | 34.3 | |
| | | Weighted n: | 3093 | 438 | 658 | |

Exhibit 6.10
(continued)

| Vocational Program | Enrollment Change 1982-83 to 1986-87 | | Percent of District/Institution: School Districts | Secondary AVS | Postsecondary Institutions | $X^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|---|
| Technical | Increase | | 29.9 | 31.4 | 48.3 | 33.37*** |
| | Decrease | | 25.3 | 22.6 | 30.9 | (.17) |
| | No Change | | 44.9 | 46.0 | 20.8 | |
| | | Weighted n: | 2896 | 473 | 796 | |
| | | Unweighted n: | 349 | 153 | 200 | |
| Trades and Industry | Increase | | 22.9 | 30.2 | 39.0 | 27.14*** |
| | Decrease | | 35.8 | 36.3 | 40.9 | (.13) |
| | No Change | | 41.4 | 33.5 | 20.2 | |
| | | Weighted n: | 4760 | 685 | 750 | |
| | | Unweighted n: | 518 | 239 | 181 | |

* $p < .05$
** $p < .01$
*** $p < .001$

vocational providers. Increases in postsecondary vocational enrollments tended to be in business and office (55% of institutions), health (46%) and technical programs (48%).

## 6.5 Summary and Conclusions

This section highlights the changes in student enrollments in vocational education from 1982-83 to 1986-87.

- **The enrollment of handicapped students in vocational education has increased in nearly 60% of secondary AVS, while it remained unchanged in the majority of school districts and postsecondary institutions.**

Forty-seven percent of AVS reported that the number of handicapped students increased by 11-20%, while 10% of AVS reported increases of greater than 20%. In contrast, only 27% of school districts reported increases of any magnitude, and 11% reported decreases in the number of handicapped students enrolled in vocational education.

The enrollment of handicapped students generally reflects total vocational enrollment patterns. However, some districts or institutions with a decrease or no change in overall vocational enrollments reported an increase in handicapped enrollments. This was particularly true at AVS, where 59% of schools reporting a decrease in overall vocational enrollments reported an increase in handicapped enrollment.

- **The majority of AVS and postsecondary institutions reported an increase of more than 10% in the number of disadvantaged students enrolled in vocational education.**

School districts were less likely to have seen increases in the number of disadvantaged students in vocational education. More than half of all districts reported no or minimal change, while 10% reported decreases in disadvantaged enrollments.

Sixty-one percent of AVS and 63% of postsecondary institutions reported increases in disadvantaged enrollments in vocational education. Moreover, 52% of AVS and 62% of postsecondary institutions with declining enrollments overall reported an increase in the number of disadvantaged students enrolled in vocational education.

- **Nearly 40% of AVS and 34% of postsecondary institutions reported decreases in overall vocational enrollments of more than 10%. In contrast, 40% of school districts reported no or minimum enrollment shifts.**

Taken together, these results suggest that vocational enrollments in school districts have generally been more stable than at AVS or postsecondary institutions. In addition, while overall vocational enrollments have tended to decline at AVS and postsecondary institutions, handicapped and disadvantaged enrollments have increased. This pattern may be due to increased numbers of handicapped and disadvantaged students taking vocational educational and/or an increased effort by AVS and postsecondary institutions to recruit students from these special populations in the face of overall declining enrollments.

- **Postsecondary institutions with increases in vocational enrollment were most likely to attribute this upswing to increased student interest in vocational education or to increased recruitment of students.**

- **Postsecondary institutions with enrollment declines were most likely to cite decreases in the number of students coming directly from high school and overall decreases in institution enrollments as factors in these declines.**

- **Secondary AVS and school districts were most likely to cite increased graduation requirements as factors related to declines in vocational enrollments.**

Nearly 70% of AVS and half of districts with enrollment declines felt that these decreases were strongly related to increases in core course requirements for graduation. In particular, school districts citing increased graduation requirements as a factor in vocational enrollments were likely to have experienced increases in the number of math or science courses required for graduation. Graduation requirements in English and social studies seemed less related to vocational enrollment declines.

- **Student enrollments in vocational programs were most likely to have decreased in agriculture; home economics/ consumer and homemaking; and trades and industry programs.**

Among AVS offering vocational agriculture, 55% reported that student enrollment had declined since 1982-83. Among postsecondary institutions, 47% reported declines in agriculture programs, while 39% of districts reported declines in this program area.

In home economics or consumer and homemaking programs, approximately 33% of secondary providers and 24% of postsecondary institutions reported that student enrollment had decreased over the last five years. For trades and industry programs, 36% of secondary and 41% of postsecondary providers reported enrollment declines.

## 7.0 CHANGES IN VOCATIONAL COURSES 1982-83 TO 1986-87

### 7.1 Introduction

In this chapter we describe the changes that have taken place in vocational course offerings over the past five years. Survey items focused on three issues of interest to this study: (1) reductions or expansions in course offerings in specific vocational program areas; (2) reasons for these changes; and (3) changes in course content, supplemental services and other program activities.

### 7.2 Changes in Vocational Offerings

Survey respondents were asked to indicate what increases or decreases have occurred in the number of vocational course offerings over the past five years, from 1982-83 through 1986-87. Programs were considered reduced or expanded if there was more than a 10% increase or decrease in the number of teaching personnel or in the number of sections or classes offered. Other response options included "no change" and "program not offered".

The results are presented in Exhibit 7.1; the percentages reflect the types of changes in districts, AVS and postsecondary institutions offering each category of vocational program. Respondents not offering a particular program were excluded from the analysis.

#### School Districts

Across program areas, more than half of all school districts reported no change in course offerings over the past five years. For example, approximately 59% of districts indicated that course offerings in agriculture, home economics/consumer and homemaking, technical, and trades and industry had not changed over the past five years. In health and marketing/distributive education programs, more than 70% of districts reported no change in the number of teaching personnel or courses offered.

#### Secondary Area Vocational Schools

At more than half of secondary AVS, programs in agriculture, health, home economics/consumer and homemaking, and marketing and distribution have remained unchanged over the last five years. Although course offerings in

Exhibit 7.1

National Estimates of Changes in Vocational Course Offerings 1982-83 to 1986-87

| Program Area | Change in Course Offerings | Percent of Districts/Institutions: School Districts | Secondary AVS | Postsecondary Institutions | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|
| Agriculture | Expanded | 20.3 | 16.9 | 26.0 | 10.02* |
| | Reduced | 21.3 | 26.9 | 30.9 | (.10) |
| | No change | 58.4 | 56.2 | 43.1 | |
| | Weighted n: | 4104 | 350 | 538 | |
| | Unweighted n: | 376 | 145 | 142 | |
| Business and office | Expanded | 32.4 | 44.5 | 49.2 | 22.58*** |
| | Reduced | 17.1 | 13.6 | 8.8 | (.12) |
| | No change | 50.5 | 42.0 | 42.0 | |
| | Weighted n: | 5166 | 528 | 1092 | |
| | Unweighted n: | 540 | 186 | 286 | |
| Health | Expanded | 16.8 | 25.1 | 35.5 | 27.72*** |
| | Reduced | 11.4 | 20.4 | 14.5 | (.15) |
| | No change | 71.8 | 54.4 | 50.0 | |
| | Weighted n: | 2472 | 474 | 1079 | |
| | Unweighted n: | 302 | 178 | 270 | |
| Home economics/ consumer and homemaking | Expanded | 16.9 | 24.7 | 17.8 | 4.18 |
| | Reduced | 24.7 | 21.2 | 26.0 | (.06) |
| | No change | 58.3 | 54.1 | 56.2 | |
| | Weighted n: | 5885 | 385 | 508 | |
| | Unweighted n: | 551 | 147 | 141 | |
| Marketing and distribution | Expanded | 11.3 | 19.4 | 25.0 | 12.40* |
| | Reduced | 14.7 | 17.1 | 14.4 | (.11) |
| | No change | 74.0 | 63.6 | 60.7 | |
| | Weighted n: | 2454 | 388 | 808 | |
| | Unweighted n: | 368 | 138 | 239 | |

continued

Exhibit 7.1
(continued)

| Program Area | Change in Course Offerings | Percent of Districts/Institutions: School Districts | Secondary AVS | Postsecondary Institutions | $x^2$ Statistic of Group Differences (Measure of Association) |
|---|---|---|---|---|---|
| Technical | Expanded | 27.6 | 35.1 | 49.7 | 19.98*** |
| | Reduced | 14.0 | 12.8 | 15.2 | (.12) |
| | No change | 58.4 | 52.1 | 35.1 | |
| | Weighted n: | 2382 | 424 | 1028 | |
| | Unweighted n: | 327 | 143 | 275 | |
| Trades and industry | Expanded | 14.8 | 30.8 | 28.4 | 19.98*** |
| | Reduced | 26.2 | 21.8 | 23.0 | (.12) |
| | No change | 59.0 | 47.5 | 48.6 | |
| | Weighted n: | 3701 | 581 | 955 | |
| | Unweighted n: | 452 | 206 | 250 | |

* $p < .05$
*** $p < .001$

technical programs did not change in 52% of AVS, 35% of AVS did report expanding courses in this program area. Similarly, courses in trades and industry were expanded in 31% of AVS and remained unchanged in 48% of AVS.

Business and office is the program area in which the largest proportion of AVS (45%) reported expanding course offerings. However, a similar proportion of AVS (42%) reported that this program area had not changed in the last five years.

Postsecondary Institutions

In postsecondary institutions, the course offerings most likely to have remained unchanged over the last five years include: health (50%), home economics/consumer and homemaking (56%), and marketing and distribution (61%). In contrast, courses in business and office as well as technical programs were expanded by approximately 49% of postsecondary institutions. Programs in agriculture were reduced in 31% of institutions, expanded in 26% and remained unchanged in 43% of postsecondary providers.

Courses Most Likely to Have Changed

These results suggest that there is no definitive pattern at AVS or postsecondary institutions of program areas expanded over the last five years. While some institutions have expanded course offerings in a particular area, an almost equal proportion reported no changes or reductions.

For example, vocational course offerings in agriculture were reduced in 27% of secondary AVS and 31% of postsecondary institutions. However, 26% of postsecondary institutions reported expanding course offerings in this area. Trades and industry is another program area where a similar proportion of postsecondary institutions indicated reduction (23%) as expansion (28%). A similar pattern is seen for trades and industry programs at AVS, since 31% reported expansion and 22% reported reduction. Nevertheless, AVS and postsecondary institutions were more likely to have expanded programs in trades and industry than were school districts, where only 15% expanded course offerings in this area.

Across the three types of providers, course offerings in technical training and business/office education were most likely to have increased over

the past five years. More than 40% of AVS and postsecondary institutions and 32% of districts expanded business and office programs. Technical programs have expanded in 28-35% of secondary LEAs and in half of postsecondary institutions offering this program. In addition, 36% of postsecondary institutions and 25% of AVS reported increases in health courses, a significantly higher proportion than the percentage of districts (17%) reporting expanding course offerings in this vocational area.

## 7.3 Reasons for Expanding Vocational Programs

Exhibits 7.2, 7.3 and 7.4 present the reasons cited by districts, secondary AVS and postsecondary institutions for expanding vocational course offerings. In each vocational area, the percentages shown reflect the most important reasons cited by the respondents who expanded course offerings in that particular program. Since a small percentage of respondents expanded programs, the sample sizes associated with these percentages tend to be small.

### School Districts

Across program areas, greater student interest was the most common reason indicated for expanding vocational programs in school districts (Exhibit 7.2). This was cited as a factor by 82% of districts expanding agriculture programs and 83% of districts expanding technical programs. Greater student interest also was cited as a reason for program expansion in more than 70% of districts increasing course offerings in business and office, marketing and distribution, and trades and industry.

Overall increases in vocational enrollments was a reason cited by approximately 20-35% of districts expanding vocational programs. For example, 38% of districts expanding course offerings in health and 34% of districts expanding trades and industry programs indicated that this expansion was related to overall increases in vocational enrollments. In 26% of districts expanding courses in business and office or marketing and distribution, increases in vocational enrollments was selected as an important reason for this expansion.

Increased funding was a factor in expanding course offerings in particular program areas. Additional local funding was an important reason in 20-30% of districts expanding all vocational programs except health. In

Exhibit 7.2

Reasons for Expanding Vocational Course Offerings
in School Districts

| Most Important Reasons for Program Expansion | Percent of Districts by Program Area | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agric. | Business & Office | Consumer & Homemaking | Marketing & Distribution | Health | Tech. | Trades & Industry |
| Greater student interest in program | 81.9 | 76.5 | 61.7 | 78.4 | 50.3 | 83.0 | 74.4 |
| Additional federal funds: Perkins Act | 12.3 | 16.7 | 14.5 | 15.0 | 5.9 | 22.7 | 16.7 |
| Additional federal funds: other sources | 5.2 | 8.5 | 5.5 | 0.0 | 0.8 | 5.5 | 11.2 |
| Additional state funding | 8.2 | 20.4 | 15.5 | 9.7 | 5.1 | 15.5 | 8.0 |
| Additional local funding | 29.4 | 24.8 | 22.1 | 20.6 | 10.8 | 21.6 | 28.7 |
| Desire to meet increased labor market demand | 10.7 | 47.5 | 9.7 | 52.9 | 31.3 | 58.0 | 64.4 |
| New state or district policy | 11.0 | 20.5 | 25.8 | 7.5 | 42.2 | 20.8 | 12.6 |
| Overall increase in vocational enrollments | 27.9 | 26.4 | 17.5 | 26.3 | 38.4 | 27.7 | 33.8 |
| Program no longer offered at another institution | 0.9 | 0.5 | 0.8 | 0.5 | 0.0 | 0.0 | 2.0 |
| Request by employers or PIC (JTPA) | 2.5 | 7.0 | 2.7 | 9.1 | 6.5 | 3.2 | 10.2 |
| Weighted n: | 1062 | 1950 | 1240 | 312 | 537 | 847 | 776 |
| Unweighted n: | 58 | 198 | 111 | 61 | 71 | 82 | 79 |

health programs, local funding was cited by only 11% of districts expanding course offerings. Additional state funding was selected by 15-20% of districts as a reason for expanding course offerings in business and office, consumer and homemaking, and technical programs. Additional federal funds from the Perkins Act was a reason selected by 23% of districts expanding technical programs and 17% of districts expanding business and office or trades and industry programs.

Desire to meet increased labor market demands was an important reason for expanding programs in marketing and distribution (53% of districts), technical (58%), and trades and industry (64%). A new state or district policy was cited as a reason for expansion by 42% of districts that increased course offerings in health.

Secondary Area Vocational Schools

At area vocational schools, greater student interest and desire to meet increased labor market demands were the key reasons for program expansion (Exhibit 7.3). A majority of AVS selected these two reasons in all program areas except agriculture. For example, among AVS expanding programs in marketing and distribution, 82% cited greater student interest and 100% cited meeting labor market demands as important reasons for expansion. Expanding consumer and homemaking programs was more strongly related to student interest (90%) than to labor market demands (51%). However, in agriculture, 35% of AVS expanding programs indicated student interest was a factor, 43% cited labor market demands, and 36% replied that programs in agriculture were expanded because they were no longer offered at other institutions.

Requests by employers or Private Industry Councils spurred growth in programs in agriculture, business and office, health, and trades and industry in 29-33% of AVS expanding these programs.

Additional funding from the Perkins Act as well as from state and local sources were factors in expanding consumer and homemaking education as well as trades and industry programs. Among AVS expanding consumer and homemaking course offerings, 41% selected increased Perkins' funding as an important reason, and 33% selected increased state and local funding. Among AVS expanding courses in trades and industry, 27% related this expansion to additional Perkins' funds, 36% to increased state funds and 33% to increased local funds.

Exhibit 7.3

Reasons for Expanding Vocational Course Offerings
in Secondary Area Vocational Schools

| Most Important Reasons for Program Expansion | Percent of Schools by Program Area | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agric. | Business & Office | Consumer & Homemaking | Marketing & Distribution | Health | Tech. | Trades & Industry |
| Greater student interest in program | 35.3 | 77.3 | 90.1 | 82.1 | 79.7 | 63.2 | 62.8 |
| Additional federal funds: Perkins Act | 3.2 | 15.6 | 40.8 | 21.9 | 19.2 | 19.0 | 26.6 |
| Additional federal funds: other sources | 0.0 | 6.5 | 14.7 | 17.9 | 3.3 | 4.7 | 1.6 |
| Additional state funding | 25.1 | 18.2 | 32.2 | 17.9 | 27.8 | 19.9 | 35.6 |
| Additional local funding | 10.4 | 16.5 | 32.2 | 8.8 | 16.1 | 19.8 | 33.3 |
| Desire to meet increased labor market demand | 43.2 | 80.6 | 50.7 | 100.0 | 75.5 | 68.9 | 67.0 |
| New state or district policy | 0.0 | 8.5 | 23.2 | 4.0 | 7.4 | 8.1 | 10.4 |
| Overall increase in vocational enrollment | 7.2 | 24.1 | 39.0 | 23.9 | 10.7 | 14.6 | 28.8 |
| Program no longer offered at another institution | 36.1 | 8.3 | 2.6 | 0.0 | 8.4 | 2.8 | 14.3 |
| Request by employers or PIC (JTPA) | 32.8 | 31.8 | 19.2 | 19.9 | 28.7 | 12.6 | 28.7 |
| Weighted n: | 34 | 232 | 85 | 63 | 116 | 137 | 166 |
| Unweighted n: | 13 | 50 | 22 | 14 | 27 | 36 | 41 |

Postsecondary Institutions

As with secondary LEAs, greater student interest was a key factor in expanding vocational programs at postsecondary institutions (Exhibit 7.4). More than 60% of institutions expanding programs selected this as an important reason.

Desire to meet increased labor market demands was another important reason for program expansion, particularly in business and office (77%), health (77%), technical (81%) and trades and industry programs (73%). In addition, more than half of the institutions increasing course offerings in health, home economics, technical, and trades and industry programs indicated that requests by employers were an important factor in program expansion.

Increased federal funding from the Perkins Act was cited as an important reason for program expansion by 37% of institutions increasing course offerings in trades and industry, 27% of institutions expanding business and office courses, and 25% of institutions expanding technical programs. In addition, increased state funding was an important reason for program expansion in 25% of institutions expanding technical programs and 28% of institutions expanding course offerings in trades and industry programs.

## 7.4 Reasons for Reducing Vocational Programs

Exhibits 7.5, 7.6, and 7.7 present the reasons cited by districts, secondary AVS and postsecondary institutions for reducing vocational course offerings. In each vocational area, the percentages shown reflect the most important reasons cited by the respondents who reduced course offerings in that particular program. Since only a subset of respondents reduced programs, in many cases the sample sizes are quite small.

School Districts

Decreased student interest and decreased vocational enrollments were the two reasons selected most often by districts reducing vocational course offerings (Exhibit 7.5). More than 60% of districts reducing programs cited decreased student interest as an important factor in all program areas except technical programs and trades and industry, where only 46-49% of districts related decreases in course offerings to student interest.

Exhibit 7.4

Reasons for Expanding Vocational Course Offerings
in Postsecondary Institutions

| Most Important Reasons for Program Expansion | Percent of Institutions by Program Area | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agric. | Business & Office | Health | Home Economics | Marketing & Distribution | Tech. | Trades & Industry |
| Greater student interest in program | 67.2 | 76.2 | 77.8 | 75.5 | 81.8 | 74.3 | 61.6 |
| Additional federal funds: Perkins Act | 16.0 | 27.3 | 15.5 | 31.7 | 12.7 | 24.7 | 36.9 |
| Additional federal funds: other sources | 4.5 | 12.3 | 20.6 | 15.0 | 3.5 | 17.0 | 14.0 |
| Additional state funding | 8.0 | 18.7 | 8.3 | 19.2 | 12.4 | 25.0 | 28.2 |
| Additional local funding | 7.1 | 9.7 | 16.5 | 7.9 | 12.9 | 12.1 | 15.5 |
| Desire to meet increased labor market demand | 42.0 | 77.2 | 76.9 | 62.6 | 65.2 | 80.5 | 73.3 |
| Overall increase in vocational enrollments | 18.4 | 30.5 | 22.6 | 35.6 | 43.9 | 23.7 | 27.3 |
| Program no longer offered at another institution | 0.9 | 0.8 | 1.7 | 0.0 | 2.5 | 4.3 | 5.1 |
| Request by PIC (JTPA) | 7.5 | 20.6 | 8.4 | 9.1 | 17.1 | 10.2 | 18.8 |
| Introduction of customized training | 13.0 | 33.4 | 10.9 | 12.0 | 14.5 | 38.7 | 41.3 |
| Shift to shorter programs | 0.9 | 12.5 | 1.7 | 9.7 | 6.6 | 8.8 | 12.2 |
| More flexible entry, exit or scheduling policies | 25.3 | 31.0 | 17.4 | 46.1 | 20.2 | 24.4 | 24.3 |
| Request by employers | 32.8 | 41.7 | 51.2 | 61.3 | 38.8 | 56.8 | 51.2 |
| Weighted n: | 133 | 563 | 403 | 84 | 190 | 568 | 287 |
| Unweighted n: | 27 | 162 | 91 | 26 | 66 | 132 | 77 |

Exhibit 7.5

Reasons for Reducing Vocational Course Offerings
in School Districts

| Most Important Reasons for Program Reduction | Percent of Districts by Program Area | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agric. | Business & Office | Consumer & Homemaking | Marketing & Distribution | Health | Tech. | Trades & Industry |
| Decreased student interest in program | 65.2 | 69.7 | 63.5 | 72.9 | 60.6 | 45.9 | 48.6 |
| Decreased federal funds: Perkins Act | 10.2 | 11.6 | 3.5 | 4.5 | 14.5 | 11.0 | 12.1 |
| Decreased federal funds: other sources | 3.9 | 7.8 | 5.8 | 0.5 | 10.7 | 4.8 | 5.0 |
| Decreased state funding | 33.8 | 13.4 | 22.5 | 9.1 | 16.4 | 9.6 | 22.5 |
| Decreased local funding | 16.5 | 13.9 | 13.0 | 14.3 | 12.5 | 17.2 | 23.4 |
| Program started or expanded at another institution | 2.1 | 5.5 | 0.2 | 6.4 | 6.6 | 1.9 | 7.3 |
| Loss of appropriate teachers without replacement | 8.4 | 5.3 | 6.4 | 6.4 | 24.1 | 16.2 | 14.7 |
| Difficulty placing students in jobs for which they were trained | 9.3 | 4.3 | 3.2 | 8.8 | 11.4 | 1.8 | 12.5 |
| Students found course too difficult | 0.0 | 7.9 | 0.0 | 0.0 | 1.3 | 5.6 | 1.3 |
| Overall decrease in vocational enrollments | 26.1 | 54.2 | 45.0 | 65.1 | 60.8 | 78.2 | 57.6 |
| Weighted n: | 932 | 1067 | 1503 | 291 | 249 | 358 | 117 |
| Unweighted n: | 124 | 129 | 166 | 54 | 40 | 69 | 168 |

Decreases in vocational enrollments were most strongly related to reducing course offerings in technical programs (78% of districts), marketing and distribution (65%), health (61%), trades and industry (58%), and business and office (54%). In districts reducing programs in agriculture and consumer and homemaking, fewer than half selected overall decreases in vocational enrollment as an important factor.

The loss of appropriate teachers without replacements was cited by 24% of districts as an important reason for reducing programs in health, and to a lesser extent for technical (16%) and trades and industry programs (15%).

One third of districts reducing course offerings in agriculture indicated that reduced state funding was an important factor. In addition, 23% of districts reducing consumer and homemaking programs and 23% of districts reducing trades and industry programs cited reduced state monies as an important reason.

Secondary Area Vocational Schools

Decreased student interest is clearly an important reason for program reduction at AVS. As Exhibit 7.6 shows, 93% of schools reducing course offerings in agriculture cited decreased student interest as an important factor. Eighty-two percent of AVS reducing trades and industry programs and 75% of those reducing business and office courses indicated that reduced student interest was an important reason. In other program areas, more than half of AVS reducing course offerings indicated student interest was a factor.

Overall decreases in vocational enrollments also was related to reducing programs at AVS in most program areas. Of AVS reducing agriculture programs, 68% cited decreased vocational enrollment as an important factor. More than half of AVS reducing programs in trades and industry (63%), marketing and distribution (57%), and consumer and homemaking (54%) also indicated that declining vocational enrollment was an important reason.

Among AVS reducing business and office course offerings, 34% of the schools reported that these programs were reduced because a similar program was started or expanded at another institution.

Exhibit 7.6

Reasons for Reducing Vocational Course Offerings
in Secondary Area Vocational Schools

| Most Important Reasons for Program Reduction | Percent of Schools by Program Area | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agric. | Business & Office | Consumer & Homemaking | Marketing & Distribution | Health | Tech. | Trades & Industry |
| Decreased student interest in program | 93.4 | 74.7 | 57.3 | 60.0 | 68.0 | 70.8 | 82.3 |
| Decreased federal funds: Perkins Act | 3.4 | 2.7 | 7.1 | 0.0 | 1.1 | 4.3 | 10.3 |
| Decreased federal funds: other sources | 0.0 | 1.3 | 2.9 | 0.0 | 1.1 | 0.0 | 3.2 |
| Decreased state funding | 3.4 | 5.7 | 10.2 | 2.0 | 5.6 | 16.6 | 13.4 |
| Decreased local funding | 7.1 | 4.0 | 20.1 | 2.0 | 12.2 | 14.9 | 13.0 |
| Program started or expanded at another institution | 0.0 | 34.2 | 0.0 | 0.0 | 2.3 | 9.4 | 5.7 |
| Loss of appropriate teachers without replacement | 4.1 | 0.0 | 10.8 | 25.6 | 11.1 | 0.0 | 7.2 |
| Difficulty placing students in jobs for which they were trained | 38.6 | 0.0 | 16.3 | 23.2 | 3.5 | 4.3 | 26.1 |
| Students found course too difficult | 0.0 | 4.0 | 0.0 | 0.0 | 5.9 | 18.4 | 3.9 |
| Overall decrease in vocational enrollments | 68.3 | 43.0 | 54.3 | 57.3 | 47.4 | 40.6 | 63.3 |
| Weighted n: | 100 | 82 | 79 | 54 | 101 | 59 | 141 |
| Unweighted n: | 60 | 43 | 38 | 22 | 49 | 28 | 81 |

Difficulty placing students in jobs for which they were trained was an important reason in 39% of AVS for reducing programs in agriculture, 26% decreasing course offerings in trades and industry programs, and 23% reducing programs in marketing and distribution. Loss of appropriate teachers without replacements also was cited by 26% of AVS as a reason for reducing programs in marketing and distribution.

Postsecondary Institutions

Postsecondary institutions cited a variety of reasons for reducing vocational programs (Exhibit 7.7). Decreased student interest was selected by more than 80% of respondents as a factor in decreasing course offerings in all fields except business and office. In that field, only 45% of institutions cited student interest as a factor in reducing course offerings. Instead, 71% of institutions reducing business and office programs indicated that overall decreases in vocational enrollments was the most important reason for program reduction. Decreased vocational enrollments also related to reductions in technical programs (62%), marketing and distribution (56%), and trades and industry programs (54%).

Difficulty placing students in jobs for which they were trained was a factor cited by more than half of postsecondary respondents as related to reducing course offerings in agriculture (64%), home economics (61%), marketing and distribution (54%), and technical programs (45%). In all fields except health and business and office, decreased labor market demand also was an important reason for decreasing course offerings. Decreased labor market demand was a particularly important factor in reducing programs in agriculture.

## 7.5 Changes in Course Content, Supplemental Services and Other Program Activities

Survey respondents were asked to indicate changes in other aspects of vocational programs such as course content and supplemental services. The response options included "added or expanded", "reduced or discontinued", "no change", and "not offered". However, few respondents indicated reductions in any categories, suggesting that the positive wording of most activities and services may have encouraged socially desirable answers. Thus, the percentage

Exhibit 7.7

Reasons for Reducing Vocational Course Offerings
in Postsecondary Institutions

| Most Important Reasons for Program Expansion | Percent of Institutions by Program Area | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agric. | Business & Office | Health | Home Economics | Marketing & Distribution | Tech. | Trades & Industry |
| Decreased student interest in program | 93.4 | 44.8 | 81.6 | 95.9 | 81.5 | 86.0 | 92.6 |
| Decreased federal funds: Perkins Act | 6.0 | 0.0 | 6.1 | 14.6 | 0.0 | 0.6 | 0.0 |
| Decreased federal funds: other sources | 0.7 | 0.0 | 8.1 | 14.6 | 0.0 | 0.6 | 3.9 |
| Decreased state funding | 36.7 | 1.1 | 11.4 | 16.9 | 0.0 | 35.4 | 25.2 |
| Decreased local funding | 21.6 | 1.1 | 7.6 | 7.8 | 2.1 | 7.9 | 4.9 |
| Competing program at another institution | 4.7 | 19.4 | 14.3 | 33.7 | 38.1 | 53.7 | 7.2 |
| Loss of appropriate teachers without replacement | 7.8 | 4.7 | 4.8 | 1.8 | 0.0 | 14.3 | 1.5 |
| Difficulty placing students in jobs for which they were trained | 63.7 | 4.5 | 8.0 | 60.9 | 53.8 | 52.7 | 44.7 |
| Students found course too difficult | 0.6 | 1.0 | 3.1 | 0.9 | 0.0 | 9.3 | 3.7 |
| Overall decrease in vocational enrollments | 47.7 | 70.9 | 20.6 | 45.3 | 56.0 | 62.1 | 53.9 |
| Decreased labor market demand | 75.7 | 8.6 | 14.7 | 59.2 | 41.7 | 50.5 | 53.2 |
| Weighted n: | 159 | 109 | 155 | 138 | 121 | 167 | 242 |
| Unweighted n: | 44 | 32 | 45 | 35 | 28 | 41 | 53 |

of respondents adding or expanding activities might be inflated. For this reason, the interesting results are seen in the relative percentages among activities.

Exhibit 7.8 displays the results for school districts. Responses to advances in technology were the most common changes in vocational program content, cited by 62% of districts. Supplemental services for handicapped or disadvantaged students have been added or expanded by 48% of districts. In addition, 40-44% of districts have added or expanded remedial basic skills instruction, career exploration activities, assessments of interests and abilities in vocational education, and vocational guidance/counseling.

Fewer than 20% of districts have initiated integrated curriculum offerings with postsecondary institutions or started work experience programs over the past five years. However, approximately 50% of districts reported that these two activities have remained unchanged, suggesting that they do exist in school districts.

Exhibit 7.9 presents the changes in course content and supplemental services in AVS over the past five years. More than 60% of AVS have added or expanded a number of activities, including: remedial basic skills instruction (70%); responses to advances in technology (80%); assessment of interests and abilities in vocational education (63%); supplemental services for handicapped and disadvantaged students (73%); and articulation agreements with postsecondary institutions (68%). In fact, few AVS reported that any of the services or activities listed had been reduced or was not offered.

As Exhibit 7.10 indicates, the two activities added or expanded by the largest proportion of postsecondary institutions are remedial basic skills instruction (72%) and responses to advances in technology (84%). Supplemental services for handicapped and disadvantaged students as well as customized training for industry have been expanded or added by approximately 65% of postsecondary institutions.

## 7.6 Summary and Conclusions

In this section we highlight the changes in vocational course offerings between 1982-83 and 1986-87.

Exhibit 7.8

Changes Over the Last Five Years in Course Content, Supplemental Services and Other Program Activities in School Districts

| | Percent of Districts[a] | | | |
|---|---|---|---|---|
| | Added or Expanded | Reduced or Discontinued | No Change | Not Offered |
| General or transferable vocational skills courses (e.g., Principles of Technology) | 33.1 | 1.4 | 43.2 | 22.3 |
| Specific occupational skills training | 38.3 | 5.6 | 49.7 | 6.5 |
| Remedial basic skills instruction | 40.4 | 1.7 | 46.6 | 11.3 |
| Integrated math and science curriculum | 21.5 | 0.5 | 52.6 | 25.4 |
| Work experience programs | 18.5 | 5.9 | 51.7 | 24.0 |
| Career exploration | 40.6 | 1.9 | 49.8 | 7.7 |
| Responses to advances in technology | 62.1 | 0.2 | 26.5 | 11.2 |
| Assessment of interests and abilities in vocational education | 43.8 | 0.3 | 49.5 | 6.2 |
| Vocational guidance/counseling | 43.5 | 2.5 | 46.9 | 7.1 |
| Supplemental services for handicapped or disadvantaged students | 48.3 | 0.5 | 42.1 | 9.1 |
| Activities to promote sex equity | 32.8 | 0.3 | 51.8 | 15.0 |
| Articulation agreements with postsecondary institutions | 24.6 | 0.0 | 48.9 | 26.5 |
| Integrated curriculum offerings with postsecondary institutions | 15.8 | 0.4 | 50.2 | 33.6 |
| Student leadership programs | 29.3 | 1.6 | 60.9 | 8.3 |
| Job placement activities | 24.5 | 1.0 | 59.5 | 15.0 |

[a] Weighted n=6436; unweighted n=545

Exhibit 7.9

Changes Over the Last Five Years in Course Content, Supplemental Services and Other Program Activities in Secondary Area Vocational Schools

| | Percent of Schools[a] | | | |
|---|---|---|---|---|
| | Added or Expanded | Reduced or Discontinued | No Change | Not Offered |
| General or transferable vocational skills courses (e.g., Principles of Technology) | 47.4 | 5.3 | 24.0 | 23.2 |
| Specific occupational skills training | 57.4 | 7.9 | 34.2 | 0.5 |
| Remedial basic skills instruction | 70.4 | 0.0 | 23.6 | 6.0 |
| Integrated math and science curriculum | 48.9 | 1.2 | 28.8 | 21.2 |
| Work experience programs | 28.3 | 6.3 | 56.0 | 9.4 |
| Career exploration | 38.5 | 2.7 | 46.6 | 12.1 |
| Responses to advances in technology | 79.7 | 0.2 | 15.5 | 4.6 |
| Assessment of interests and abilities in vocational education | 62.6 | 1.0 | 34.9 | 1.5 |
| Vocational guidance/counseling | 52.4 | 1.7 | 43.7 | 2.2 |
| Supplemental services for handicapped or disadvantaged students | 73.1 | 1.5 | 25.4 | 0.0 |
| Activities to promote sex equity | 58.7 | 0.5 | 39.4 | 1.4 |
| Articulation agreements with postsecondary institutions | 67.7 | 0.0 | 24.1 | 8.2 |
| Integrated curriculum offerings with postsecondary institutions | 43.5 | 0.0 | 40.6 | 15.8 |
| Student leadership programs | 53.3 | 2.0 | 44.3 | 0.4 |
| Job placement activities | 52.1 | 2.0 | 43.8 | 2.1 |

[a] Weighted n=550; unweighted n=192

Exhibit 7.10

Changes Over the Last Five Years in Course Content, Supplemental Services and Other Program Activities in Postsecondary Institutions

| | Percent of Institutions[a] | | | |
|---|---|---|---|---|
| | Added or Expanded | Reduced or Discontinued | No Change | Not Offered |
| General vocational courses | 23.3 | 9.2 | 49.9 | 17.7 |
| Specific occupational skills training | 56.7 | 9.1 | 28.3 | 5.9 |
| Remedial basic skills instruction | 72.4 | 1.5 | 25.3 | 0.8 |
| Customized training for industry | 65.1 | 1.2 | 20.3 | 13.4 |
| Contracting with other postsecondary institutions to provide vocational education jointly | 18.2 | 0.0 | 37.2 | 44.6 |
| Competency-based curricula | 52.7 | 0.2 | 31.7 | 15.4 |
| Responses to advances in technology | 84.3 | 0.0 | 10.1 | 5.6 |
| Vocational guidance, counseling or assessment of student interests | 58.5 | 1.8 | 33.0 | 6.8 |
| Supplemental services for handicapped or disadvantaged students | 62.3 | 0.9 | 32.6 | 4.2 |
| Activities to promote sex equity | 58.0 | 0.0 | 36.6 | 5.4 |
| Articulation agreements with secondary schools | 56.0 | 0.6 | 33.1 | 10.3 |
| Integrated curriculum offerings with secondary schools | 24.8 | 0.7 | 38.2 | 36.2 |
| Upgrading of employment skills for out-of-school youth | 29.3 | 1.5 | 43.0 | 26.2 |
| Business assistance programs | 35.8 | 0.5 | 35.5 | 28.2 |
| Job placement activities | 46.8 | 0.5 | 49.6 | 3.1 |

[a] Weighted n=979; unweighted n=235

- **In general, the number of vocational courses offered in school districts has remained unchanged over the last five years.**

More than 70% of districts reported no changes in the number of courses or teaching personnel in health as well as marketing and distribution programs. Approximately 58% of districts reported that there were no changes in course offerings in agriculture, home economics/ consumer and homemaking, technical, or trades and industry programs.

- **Courses offerings were most likely to have been expanded over the last five years in technical programs and business and office education, particularly at AVS and postsecondary institutions.**

Fifty-four percent of secondary AVS, 49% of postsecondary institutions and 32% of school districts reported expanding course offerings in business and office programs. In technical programs, 50% of postsecondary institutions, 35% of secondary AVS and 28% of districts expanded course offerings over the last five years.

- **Courses in agriculture and trades and industry were most likely to have been reduced over the last five years, particularly at AVS and postsecondary institutions.**

Twenty-seven percent of secondary AVS, 31% of postsecondary institutions and 21% of school districts reported reducing course offerings in agriculture programs. In trades and industry, 23% of postsecondary institutions, 22% of secondary AVS and 26% of districts reduced course offerings over the last five years.

- **Where course offerings were expanded, greater student interest was one reason for this expansion cited by a majority of respondents across program areas.**

In school districts, more than 80% of districts expanding courses in agriculture and technical programs indicated that an important reason for this expansion was increased student interest. At secondary AVS, more than 80% of schools cited student interest as a key reason for expanding programs in consumer and homemaking and in marketing and distribution. At postsecondary institutions, more than 60% of institutions expanding programs indicated that increased student interest was an important factor in each of the seven vocational areas investigated.

- **A desire to meet increased labor market demands was cited as an important reason for expanding programs in marketing and distribution, technical training, and trades and industry by each type of vocational provider.**

Among providers expanding course offerings in these program areas, 50-65% of school districts, 65-100% of AVS, and 65-80% of postsecondary institutions cited labor market demands as an important reason. In addition, at secondary AVS and postsecondary institutions, increased labor market demand also was related to expanding course offerings in health and business and office programs.

- **Additional federal funding from the Perkins Act was cited by approximately 20-30% of respondents as related to expanding vocational course offerings in specific program areas.**

Twenty-three percent of school districts indicated that an increase in these federal funds was an important factor in expanding technical programs. At secondary AVS, 41% of schools expanding consumer and homemaking programs selected increased Perkins' funds as an important factor. Of postsecondary institution expanding programs, 37% cited Perkins' funds as a reason for expanding course offerings in trades and industry programs, 32% in home economics and 27% in business and office programs.

- **Decreased student interest and declining vocational enrollments were the two reasons cited most often as related to reducing vocational course offerings.**

Decreased enrollment and decreased student interest were cited by more than half of secondary AVS reducing each type of vocational program. In school districts, declining enrollments seemed to affect technical course offerings more than other areas; decreased student interest was most often cited as a reason for reducing courses in marketing and distribution programs. In postsecondary institutions, declining enrollment was cited most often as related to course reductions in business and office programs and technical programs; decreased student interest was consistently selected by more than 80% of institutions as relating to reductions in all program areas except business and office.

- **Responses to advances in technology was the most frequent type of change in course content reported by districts, AVS, and postsecondary institutions.**

Sixty-two percent of school districts, 80% of AVS and 84% of post-secondary institutions indicated that they have upgraded vocational course offerings in response to advances in technology.

- **Remedial basic skills instruction and supplemental services for handicapped or disadvantaged students have been added or expanded over the last five years by a large proportion of providers, particularly AVS and postsecondary institutions.**

More than 70% of secondary AVS and postsecondary institutions have added or expanded remedial basic skills instruction over the last five years. In contrast, only 40% of school districts have added or expanded this type of remedial instruction. However, 47% of districts indicated that this supplemental service had remained unchanged over the last five years, suggesting that remedial basic skills instruction was already in place in many districts.

Similarly, 73% of AVS and 62% of postsecondary institutions have added or expanded supplemental services for handicapped or disadvantaged students, compared with 48% of districts that have added or expanded these supplemental services. In 42% of districts, these supplemental service have remained unchanged over the past five years.

## 8.0 VOCATIONAL EDUCATION AND THE JOB TRAINING PARTNERSHIP ACT (JTPA)

### 8.1 Introduction

The Perkins' legislation encouraged the cooperation between programs run under the Job Training Partnership Act (JTPA) and vocational programs in secondary and postsecondary settings. To explore the extent to which districts and institutions received and used JTPA funds, a series of questions about JTPA funds were included on the secondary and postsecondary surveys. In this chapter, we present these findings.

### 8.2 Proportion of Districts and Institutions Receiving JTPA Funds

Based on the survey results, an estimated 25% of districts received JTPA funds in 1986-87. Among districts awarded these funds, 64% reported that these monies were used in activities related to vocational education. In contrast, 65% of secondary AVS and 60% of postsecondary institutions received JTPA funds in 1986-87, and more than 92% of each type of provider indicated that these funds were used for vocational education.

Exhibit 8.1 shows the percentage of districts, secondary AVS and postsecondary institutions receiving funds in each category of JTPA monies. Only districts and institutions that received JTPA funds in at least one category are included in the exhibit. In this way, we can look at the relative participation rates of school districts, AVS and postsecondary institutions.

The majority of school districts receiving JTPA funds were awarded Title IIB monies for Summer Youth. Sixty-two percent of districts received funds in this category, while fewer than 40% of districts received funds in any of the other funding categories. Title IIA Block Grants were the second most common type of JTPA money awarded to school districts, with 35% of districts receiving funds in this category. Twenty-three percent of districts received 8% coordination money, and less than 3% of districts received Title III funds for dislocated workers. Approximately 20% of districts indicated that they received other JTPA funds during 1986-87.

Forty-two percent of the secondary AVS receiving JTPA money in 1986-87 were awarded Title IIA Block Grants, 36% received Title IIB funds for summer youth, and 33% received the 8% coordination monies. In addition, 13%

Exhibit 8.1

Relative Participation Rates Among Districts, Secondary Area Vocational Schools (AVS), and Postsecondary Institutions Receiving Funds from the Job Training Partnership Act (JTPA)

| Category of JTPA Funds | % Receiving Funds[a] | | | $X^2$ Statistic of Group Differences (Measure of Association) | |
|---|---|---|---|---|---|
| | Districts[b] | AVS[c] | Postsecondary[d] | | |
| Title IIA (Block Grant) | 35.3 | 42.1 | 31.8 | 3.27 | (.09) |
| Title IIB (Summer Youth) | 61.6 | 35.8 | 36.1 | 20.76*** | (.23) |
| Title III (Dislocated Workers) | 2.9 | 13.0 | 32.9 | 42.28*** | (.33) |
| 8% Coordination Grants | 23.3 | 32.8 | 50.1 | 21.51*** | (.23) |
| Other JTPA Funds | 20.7 | 28.3 | 32.0 | 4.11 | (.10) |

[a]Includes only those receiving funds in at least one category
[b]Weighted n = 1441; unweighted n = 209
[c]Weighted n = 389; unweighted n = 135
[d]Weighted n = 706; unweighted n = 197

*** $p < .001$

of AVS were awarded Title III funds for dislocated workers and 28% received other JTPA funds.

Half of the postsecondary institutions receiving JTPA funds were awarded 8% coordination grants. Title IIA Block Grant monies were awarded to 32% of postsecondary institutions, Title IIB funds for summer youth were received by 36% of the institutions, and Title III funds for dislocated workers went to 33% of postsecondary institutions receiving JTPA funds.

Comparing the participation across types of providers, we see that school districts were more likely than AVS or postsecondary institutions to have received Title IIB money for summer youth programs. In contrast, a larger proportion of postsecondary institutions received 8% coordination funds than either school districts or secondary AVS. Postsecondary institutions also were more likely to receive Title III monies for dislocated workers than either of the secondary providers. However, block grants were awarded to districts, secondary AVS and postsecondary institutions in roughly the same proportions.

## 8.3 Amount of JTPA Funds Received by Category in 1986-87

Exhibit 8.2 summarizes the size of the awards in the individual categories of JTPA funds. Again, these estimates are based only on those respondents that received JTPA funds in at least one category.

### School Districts

School districts received an average of $40,150 in Title IIA funds, with a maximum of $2.8 million. While these block grants totaled $57.9 million, half of all districts received no money in this JTPA category.

The average award to districts of Title IIB funds for summer youth was $47,150. The maximum award was $4.5 million, although half of the districts received $2,500 or less. Title IIB awards to school districts totaled $68 million in 1986-87.

Title III awards for dislocated workers averaged only $1,333, with a maximum of $369,643. In 1986-87, these awards to school districts totaled $1.9 million, with half of all districts receiving no funds.

Exhibit 8.2

National Estimates of Funds Received from the Job Training Partnership Act (JTPA) in 1986-87 by School Districts, Secondary Area Vocational School (AVS) and Postsecondary Institutions

| Category of JTPA Funds | Type of District/ Institution | Mean | Standard Deviation | Median | Range | Total | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|---|---|
| Title IIA (Block Grant) | School district[a] | $40,150 | $160,501 | 0 | 0-2,826,071 | $57,865,012 | 1.74 |
| | Secondary AVS[b] | $24,113 | $48,874 | 0 | 0-355,000 | $9,381,944 | |
| | Postsecondary[c] | $99,441 | $544,071 | 0 | 0-6,905,812 | $70,186,327 | |
| Title IIB (Summer Youth) | School district | $47,150 | $216,515 | $2,500 | 0-4,500,000 | $67,952,764 | 0.33 |
| | Secondary AVS | $31,462 | $103,425 | 0 | 0-1,000,000 | $2,241,134 | |
| | Postsecondary | $32,877 | $154,411 | 0 | 0-1,499,399 | $23,204,647 | |
| Title III (Dislocated Worker) | School district | $1,333 | $15,423 | 0 | 0-369,643 | $1,921,824 | 9.57** |
| | Secondary AVS | $8,132 | $32,239 | 0 | 0-377,000 | $3,164,008 | |
| | Postsecondary | $31,756 | $89,239 | 0 | 0-1,126,349 | $22,413,704 | |
| 8% Coordination | School district | $10,612 | $36,236 | 0 | 0-550,000 | $15,293,626 | 8.06** |
| | Secondary AVS | $11,911 | $23,767 | 0 | 0-223,235 | $4,634,139 | |
| | Postsecondary | $35,027 | $82,173 | $1,700 | 0-699,562 | $24,722,554 | |
| Other JTPA | School district | $10,771 | $44,795 | 0 | 0-1,150,000 | $15,523,829 | 1.51 |
| | Secondary AVS | $19,397 | $46,373 | 0 | 0-430,000 | $36,968,019 | |
| | Postsecondary | $23,003 | $69,284 | 0 | 0-788,501 | $16,236,044 | |

[a]Weighted n = 1441; unweighted n = 209
[b]Weighted n = 389; unweighted n = 135
[c]Weighted n = 706; unweighted n = 197

** $p < .01$

The average award of JTPA 8% coordination funds was $10,612, with a median of zero and a maximum of $550,000. Awards in this funding category totaled $15.3 million to school districts during 1986-87.

Secondary AVS

Secondary AVS received an average of $24,113 in Title IIA funds, with a maximum of $355,000. While these block grants to AVS totaled $9.4 million, half of all AVS received no money in this category of JTPA funds.

The average award to AVS of Title IIB funds for summer youth was $31,462. The maximum award was $1 million, although again half of the AVS received no funds in this category. Title IIB awards to secondary AVS totaled $2.2 million in 1986-87.

Title III awards for dislocated workers averaged only $8,132, with a median value of zero and a maximum of $377,000. In 1986-87, these awards to secondary AVS totaled $3.2 million.

The average award of JPTA 8% coordination funds was $11,911, with a maximum of $223,235. Awards in this funding category totaled $4.6 million during 1986-87, although half of all institutions received no funds in this category.

Postsecondary Institutions

Postsecondary institutions received an average of $99,441 in Title IIA funds, with a range to $6.9 million. While these block grants totaled $70.2 million, half of all institutions received no money in this category of JTPA funds.

The average award to institutions of Title IIB funds for summer youth was $32,877. The maximum award was $1.5 million, although again half of the institutions received no funds in this category. Title IIB awards to postsecondary institutions totaled $23.2 million in 1986-87.

Title III awards to postsecondary institutions for dislocated workers averaged $31,756. This mean value is significantly higher than the average award to either school districts or secondary AVS. The maximum award to postsecondary institutions in this category was $1.1 million. In 1986-87, these awards to postsecondary institutions totaled $22.4 million, although half of all institutions received no funds in this category.

The average award of JTPA 8% coordination funds to postsecondary institutions was $35,027, with the median at $1,700 and the maximum just under $700,000. This average is significantly larger than the average awarded to either type of secondary provider. Awards to postsecondary institutions in this funding category totaled $24.7 million during 1986-87.

### 8.4 Total Amount of JTPA Funds Received in 1986-87

Exhibit 8.3 shows the total amount of JTPA funds received by districts, secondary AVS and postsecondary institutions during 1986-87. These figures represent the sum of awards in the individual categories displayed in Exhibit 8.2.

School districts received an average of approximately $110,000 in total JTPA funds. The range of JTPA funds was from $1,000 to $5.5 million, although half of all districts received less than $20,000. An estimated total of $158.6 million was awarded to school districts in 1986-87.

Secondary AVS, on average, received approximately $95,000 in total JTPA funds during 1986-87, with a range from $800 to just over $1 million and a median value of $44,154. Awards totaled just under $37 million.

Postsecondary institutions received an average of $806,242 in total JTPA funds during 1986-87, with a median of $58,528 and a range from $1,700 to just under $10 million. Awards to postsecondary institutions totaled $156.8 million.

The average total JTPA awards to districts, AVS and postsecondary institutions are not statistically different. However, the medians suggest that the majority of school districts received the smallest amount of JTPA funds and postsecondary institutions the largest ($20,000 versus $58,528).

In order to consider the total JTPA awards in the context of student enrollments, the total JTPA award was divided by the 1986 student enrollment in districts, secondary AVS and postsecondary institutions. These figures are summarized in Exhibit 8.4.

On average, school districts received just under $60 per student and secondary AVS received approximately $98 per student in total JTPA funds. In contrast, postsecondary institutions received an average of approximately $285 per student. Since the standard deviations of these means are so large, the

Exhibit 8.3

National Estimates of Total Funds Received from the Job Training Partnership Act (JTPA) by Districts, Secondary AVS and Postsecondary Institutions

| Type of District/ Institution | Total JTPA Funds Received | | | | | F Statistic of Differences Between Group Means |
|---|---|---|---|---|---|---|
| | Mean | Standard Deviation | Median | Range | Total | |
| School district[a] | $110,016 | $355,659 | $20,000 | $1,000-5,458,062 | $158,557,056 | 2.24 |
| Secondary AVS[b] | $95,014 | $139,234 | $44,154 | $800-1,030,000 | $36,968,019 | |
| Postsecondary institution[c] | $222,105 | $806,242 | $58,528 | $1,700-$9,767,124 | $156,763,276 | |

[a]Weighted n = 1441; unweighted n = 209
[b]Weighted n = 389; unweighted n = 135
[c]Weighted n = 706; unweighted n = 197

Exhibit 8.4

National Estimates of Total Amounts of Funds Received from the Job Training Partnership Act (JTPA) per Student Enrolled in School Districts, Secondary AVS and Postsecondary Institutions

| Type of District/Institution | Total JTPA Per Student: Mean | Standard Deviation | Median | F Statistic of Difference Between Group Means |
|---|---|---|---|---|
| School district[a] | $59.92 | $111.24 | $24.85 | 1.05 |
| Secondary AVS[b] | $98.01 | $148.49 | $36.86 | |
| Postsecondary institution[c] | $284.99 | $2,029.81 | $71.45 | |

[a]Weighted n = 1348; unweighted n = 190
[b]Weighted n = 323; unweighted n = 112
[c]Weighted n = 622; unweighted n = 179

mean values that would appear to be quite discrepant are not statistically different. However, again, the median values suggest that postsecondary institutions received more JTPA funds than secondary providers, even taking size into account. The median per student value for postsecondary institutions was $71.45, compared with a median of $24.85 for school districts and a median of $36.86 for AVS.

## 8.5 Relationship Between JTPA Funds and Perkins' Funds

Exhibit 8.5 shows the proportion of districts and institutions that received Perkins' and/or JTPA funds in 1986-87. A small percentage of school districts (17%) received funds from both Perkins' and JTPA. We would expect this figure to be small, knowing that only about 25% of school districts received JTPA funds at all. Indeed, a larger proportion of districts (44%) received Perkins' funds and not JTPA funds. Only 2% of districts received JTPA funds without also receiving Perkins' monies, and 37% of districts did not receive funds from either source.

In contrast with school districts, most secondary AVS (61%) received funds from both Perkins' and JTPA. Twenty-nine percent of AVS reported Perkins' expenditures without receiving JTPA funds. Only 7% of AVS did not receive federal money from either source.

Among postsecondary institutions offering vocational programs, 49% received Perkins' and JTPA money; 32% received Perkins' funds but not JTPA. Thirteen percent of institutions received neither Perkins' nor JTPA monies.

To consider the size of JTPA grants in relation to Perkins' funding, we computed the ratio of total JTPA to total Perkins' funds reported by districts, secondary AVS and postsecondary institutions. The results, presented in Exhibit 8.6, include only those respondents who received funds from both sources.

For districts receiving both Perkins' and JTPA funds, on average, the JTPA awards were more than three and a half times larger than the allocation from Perkins. In fact, in 61% of districts, JTPA funds exceeded Perkins' funds.

Among secondary AVS, Perkins' and JTPA funds were, on average, about equal. However, only 34% of AVS reported more funds from JTPA than from Perkins.

Exhibit 8.5

**National Estimates of School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions Receiving Perkins' Funds and Funds from the Job Training Partnership Act (JTPA)**

| Type of Funds Received | % Districts[a] | % AVS[b] | % Postsecondary[c] |
|---|---|---|---|
| Both Perkins and JTPA | 16.7 | 61.4 | 49.2 |
| Perkins, no JTPA | 44.0 | 28.9 | 31.6 |
| JTPA, no Perkins | 2.4 | 2.5 | 6.7 |
| Neither Perkins nor JTPA | 36.9 | 7.2 | 12.5 |

[a]Weighted n = 7286; unweighted n = 606
[b]Weighted n = 599; unweighted n = 212
[c]Weighted n = 1239; unweighted n = 285

Exhibit 8.6

Relationship Between Total JTPA Funds and Total Perkins' Funds During 1986-87
In Districts, Secondary AVS and Postsecondary Institutions

| Type of District/ Institution | Ratio of JTPA to Perkins' Funds[a] Mean | Standard Deviation | Median | F Statistic of Differences Between Group Means | % Respondents Total JTPA Funds Greater than Total Perkins' Funds |
|---|---|---|---|---|---|
| School district[b] | 3.71 | 6.43 | 1.32 | 2.43 | 61% |
| Secondary AVS[c] | 1.09 | 1.95 | 0.53 | | 34% |
| Postsecondary institution[d] | 3.08 | 13.28 | 0.57 | | 34% |

[a]Includes only those with funds received from JTPA and Perkins in 1986-87
[b]Weighted n = 1214; unweighted n = 197
[c]Weighted n = 368; unweighted n = 129
[d]Weighted n = 610; unweighted n = 184

At the postsecondary level, JTPA funds were, on average, three times larger than Perkins' funds. However, there were wide variations in this ratio among postsecondary institutions. The median ratio was 0.57, indicating that for at least half of all institutions, Perkins' allocations exceeded JTPA. Indeed, in only 34% of institutions did JTPA monies exceed Perkins' funds.

## 8.6 Coordinated Activities at Postsecondary Institutions

Postsecondary institutions were asked a series of questions about classes and activities for JTPA recipients. These results indicate that an estimated 41% of postsecondary institutions hold separate classes for JTPA recipients. However, the majority of institutions have a number of linkages between JTPA programs and vocational programs.

As Exhibit 8.7 illustrates, in 82% of postsecondary institutions, JTPA recipients are taught by vocational faculty and in 85% of institutions JTPA clients are placed in regular vocational programs. The majority of institutions (87%) assess the vocational skills and interests of JTPA recipients. In addition, more than 70% of postsecondary institutions offer career counseling and guidance, remedial course work, and job placement services to JTPA recipients. A smaller percentage (61%) offer sequenced coursework leading to eligibility for vocational education certificates or degrees.

## 8.7 Acceptance of Performance-Based Contracts

Secondary and postsecondary respondents were asked if they accepted funds that required recipients to meet performance objectives. Results indicate that 59% of postsecondary institutions and 60% of secondary AVS accept these performance-based contracts. In contrast, only 41% of school districts accept these funds.

Exhibit 8.8 presents the reasons why districts and institutions do not accept performance-based contracts. The most common response was that the size of the award was not worth the risk if performance standards were not met. This response was selected by 33% of districts and secondary AVS and 49% of postsecondary institutions. In addition, 26% of districts and 28% of AVS indicated that they did not accept these awards because they were not consulted about the testing of performance standards; this was less of an

Exhibit 8.7

**Activities at Postsecondary Institutions Run Cooperatively Between Vocational Education and Programs of the Job Training Partnership Act (JTPA)**

| Activities Run Cooperatively | Percent of Institutions[a] |
|---|---|
| JTPA recipients taught by vocational education faculty | 82.2 |
| Joint classes of JTPA recipients and vocational education students | 74.2 |
| Sequenced coursework for JTPA recipients leading to eligibility for vocational education certificates/degrees | 61.4 |
| Placement of JTPA clients in regular programs | 85.1 |
| Remedial course work | 79.9 |
| Job placement | 71.4 |
| Career counseling and guidance | 77.7 |
| Assessment of vocational skills and interests | 87.0 |

[a]Weighted n = 801; unweighted n = 220

Exhibit 8.8

Reasons Why Performance-Based Funding is Not Accepted by School Districts, Secondary Area Vocational Schools (AVS) and Postsecondary Institutions

| Reasons for Not Accepting Performance-Based Funding | % Districts | % AVS | % Postsec. |
|---|---|---|---|
| Institutional policy | 13.4 | 12.8 | 26.2 |
| Not consulted about testing of performance standards | 25.8 | 27.7 | 12.4 |
| Performance standards are unrealistic | 6.6 | 21.0 | 18.2 |
| Magnitude of award not worth the risk if performance standards not met | 33.1 | 32.7 | 48.7 |
| Weighted n: | 3550 | 249 | 507 |
| Unweighted n: | 237 | 66 | 102 |

issue for postsecondary institutions. More than a quarter of postsecondary institutions indicated that institutional policy prevents them from accepting performance-based contracts, an issue cited by less than 15% of secondary providers.

## 8.8 Summary and Conclusions

In this section we summarize the survey results about funds from the Job Training Partnership Act (JTPA).

- **Only 25% of school districts received JTPA funds in 1986-87, compared with 65% of secondary AVS and 60% of postsecondary institutions.**

More than 90% of secondary AVS and postsecondary institutions used JTPA funds for activities related to vocational education, as compared with only 64% of school districts that received these funds.

- **The majority (62%) of school districts receiving JTPA funds were awarded Title IIB monies for summer youth, as compared with only 36% of AVS and postsecondary institutions.**

- **A larger percentage of postsecondary institutions than secondary providers received JTPA funds for dislocated workers (Title III) and 8% coordination grants.**

- **On average, the total JTPA award to districts, AVS and postsecondary institutions was not statistically different, although the median values suggest that postsecondary institutions received more than secondary providers.**

The total JTPA award to districts in 1986-87 averaged approximately $110,000 and to AVS, approximately $95,000. In contrast, the total JTPA award to postsecondary institutions averaged approximately $222,000. When these figures are converted to per pupil dollars, postsecondary institutions averaged $285 per student, compared with $60 per student in school districts and $98 per students in secondary AVS. Due to wide variability around these means, the differences are not statistically significant. However, the medians, which are less affected by extreme values, also suggest that postsecondary institutions received more in JTPA funds per student ($71 per student) than secondary AVS ($37 per student) or school districts ($25 per students).

- **Among providers receiving funds from both Perkins' and JTPA, the average JTPA award to districts and postsecondary institutions was three times greater than that from Perkins; the two sources of funds were nearly equivalent at AVS.**

In 61% of school districts receiving funds from both sources, the JTPA award was larger than the Perkins' award; however, it is important to point out that only 17% of districts received funds from both sources.

At postsecondary institutions, although on average JTPA funds were greater than Perkins' funds, there was wide variability. In only 34% of institutions receiving both funds did the JTPA funds exceed the Perkins' dollars. Similarly, at AVS, in only 34% of the schools, did JTPA funds exceed Perkins' funds.

- **Performance-based contracts are accepted by approximately 60% of AVS and postsecondary institutions, but only 41% of school districts.**

The most common reason cited by each type of provider as to why these funds are not accepted is that the size of the award was not worth the risk if performance standards were not met. The second most common response by secondary providers was that they did not accept these funds because they were not consulted about the testing of the performance standards. At the postsecondary level, the second most prevalent response indicated that institutional policies prevented them from accepting performance-based contracts.

# Survey of Vocational Education Practices in Secondary Schools

***This survey is part of a study sponsored by the National Assessment of Vocational Education. We appreciate your cooperation with this part of the Congressionally-mandated study of vocational education. It is the first national survey of its kind in almost a decade.***

Please take time now to answer all the questions and return the questionnaire in the enclosed envelope to:

Abt Associates Inc.
Survey of Vocational Education Practices
55 Wheeler Street
Cambridge, MA 02138-9990

While your cooperation is essential to the success of this project, if you choose not to participate it will not affect your present or future federal funding.

## DIRECTIONS

This survey is being conducted for the National Assessment of Vocational Education (NAVE) as part of a Congressionally-mandated study to obtain information about secondary vocational education from a national sample of school districts. This information will be used to prepare a report to Congress on vocational education funding and services since the passage of the Carl D. Perkins Vocational Education Act.

If you would like to receive a summary of the survey results, please check here |__|-1 and make any necessary corrections to the mailing address shown on the survey cover.

This survey is a district survey of secondary vocational education.

- If your district offers both secondary and postsecondary programs, consider only the secondary programs in your responses to this survey.
- If your district is an area or regional vocational school, the survey applies only to secondary vocational education in that school and not to programs in the sending districts.
- If your district offers vocational education in comprehensive high schools and in vocational high schools in the district, include all of these programs in your responses.
- If your district is a member of a consortium that separately administers a regional or area vocational school, do not include programs at that regional or area vocational school in your responses.

For the purposes of this study, vocational education is broadly defined. It includes programs in:

| | |
|---|---|
| agriculture | business and office education |
| health | home economics |
| industrial arts | distributive education/marketing |
| technical training | trades and industry |

If your district does not directly offer any vocational education programs (including industrial arts or consumer and homemaking), please check here |__| and return the questionnaire without completing it.

If you are not in the best position to answer questions about vocational education services and funding, please forward this questionnaire to the most appropriate person in your district.

Please feel free to call Janet Swartz, Survey Director, at (617) 492-7100, if you have any questions.

Thank you for your time and cooperation.

## GENERAL DISTRICT INFORMATION

In this section, we are interested in general descriptive information about the district and its overall educational policies.

1. In 1982-83 and 1986-87, what was your total high school enrollment?

| | Enrollment 1982-83 | | 1986-87 | |
|---|---|---|---|---|
| All students, grades 9-12..... | _____ | 16-22/ | _____ | 23-29/ |
| All students, grades 10-12 (if high schools only cover that grade span)..... | _____ | 30-36/ | _____ | 37-43/ |

2. How many Carnegie units (i.e., regular 1-year courses or their equivalent) were required of <u>all students</u> for a standard high school diploma in 1982-83 and in 1986-87 in the following subject areas? (For less than full-year requirements, use decimals. For example, for a half-year course, write in ".5".)

| | Number of Carnegie Units Required 1982-83 | | 1986-87 | |
|---|---|---|---|---|
| English/Language Arts..... | _____ | 44-46/ | _____ | 47-49/ |
| Mathematics..... | _____ | 50-52/ | _____ | 53-55/ |
| Science..... | _____ | 56-58/ | _____ | 59-61/ |
| Social Studies/History..... | _____ | 62-64/ | _____ | 65-67/ |
| Vocational Education..... | _____ | 68-70/ | _____ | 71-73/ |

|13-14/02|

3. Do vocational education courses with academic content count as core courses toward graduation requirements?

Yes..... |__|-1

No..... |__|-2 15/

4. In 1986-87, what was the total district budget for vocational education (i.e., the total amount of funding from federal, state and local sources used by the district to support vocational education)?

Total Vocational Education Budget: $_____.00 16-23/

5. Of the following choices, what are the 3 most important goals for vocational education in your district? (Rank the most important goal as "1", the next most important as "2" and the third most important as "3".)

| Goal of Vocational Education | Rank |
|---|---|
| Promote access to vocational education for disadvantaged and handicapped students | ___ |
| Prepare students for specific occupations | ___ |
| Impart general employability skills | ___ |
| Enhance students' awareness of various occupational areas | ___ |
| Prepare students for further education or training | ___ |
| Ensure that students master basic skills | ___ |
| Prevent students from dropping out of school | ___ |
| Stimulate economic development | ___ |
| Other. Please specify: _____ | ___ |

IF YOUR SCHOOL IS AN AREA OR REGIONAL VOCATIONAL SCHOOL, GO TO QUESTION 6.

IF YOUR SCHOOL IS NOT AN AREA OR REGIONAL VOCATIONAL SCHOOL, GO TO QUESTION 7.

6. Please check the category that best describes your course offerings. (For area or regional vocational schools only.)

a. Primarily provide vocational-related instruction..... |__|-1

b. Primarily provide full range of academic and vocational courses..... |__|-2

c. Other. Please specify:
_____ |__|-6

_____

NOW PLEASE GO TO QUESTION 9.

7. Where are vocational education programs available for students who reside in your district? (Please write in the number of each type of public secondary school.)

| Number Offering Vocational Programs | |
|---|---|
| a. Comprehensive high school(s) | _____ |
| b. Vocational high school(s) | _____ |

8. Does your district send any students to an area or regional vocational school?

Yes..... |__|-1

No..... |__|-2

## VOCATIONAL EDUCATION SERVICES FOR SPECIAL POPULATIONS

### Handicapped Students*

9. In 1986-87, were there any handicapped students enrolled in vocational education programs in your district?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 14)..... |__|-2 39/

10. In 1986-87, what proportion of handicapped students enrolled in vocational education programs received any of the following supplemental services? (PLEASE CHECK ONE BOX FOR EACH SUPPLEMENTAL SERVICE.)

| Supplemental Services: | Proportion of Handicapped Students: ALL | MOST | SOME | NONE | |
|---|---|---|---|---|---|
| a. Assessment of vocational interests, abilities and special needs..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 40/ |
| b. Modified or adapted curriculum..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 41/ |
| c. Adapted or simplified equipment..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 42/ |
| d. Modified facilities..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 43/ |
| e. Guidance, counseling and career development activities..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 44/ |
| f. Guidance and counseling on transition to further education or employment..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 45/ |
| g. Other. Specify: _____ | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 46/ |

*"Handicapped" refers to both physical and mental handicapping conditions. Handicapped students include students who are mentally retarded, hard of hearing, deaf, speech or language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or persons with specific learning disabilities; and who require special services and assistance in order to enable them to succeed in vocational education programs.

Handicapped Students (continued)

11. In 1986-87, did the district spend Perkins' Title IIA funds for handicapped students?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 14)..... |__|-2

12. What was the total amount of Perkins' Title IIA funds used by the district in 1986-87 to support programs for handicapped students?

Handicapped Funds Spent in 1986-87: $_____ .00 4

13. For the Perkins' funds for handicapped students reported in Question 12, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in regular vocational classrooms | _____% | 5 |
| b. Teachers or other staff for separate vocational classes for handicapped students | _____% | 5 |
| c. Modified or new vocational equipment | _____% | 6 |
| d. Consultation services | _____% | 6 |
| e. Guidance, assessment or counseling | _____% | 6 |
| f. Development or modification of vocational curriculum | _____% | 7 |
| g. Job placement services | _____% | 7 |
| h. Other. Specify: _____ | _____% | 7 |
| TOTAL | 100% | |

## Academically Disadvantaged Students*

14. In 1986-87, were any academically disadvantaged students enrolled in vocational education programs in your district?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 16)..... |__|-2 15.

15. In 1986-87, what proportion of academically disadvantaged students enrolled in vocational education received any of the following supplemental services? (PLEASE CHECK ONE BOX FOR EACH SUPPLEMENTAL SERVICE.)

| Supplemental Services: | Proportion of Academically Disadvantaged Students: ALL | MOST | SOME | NONE | |
|---|---|---|---|---|---|
| a. Assessment of vocational interests, abilities and special needs..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 16/ |
| b. Remedial basic skills instruction in vocational classes..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 17/ |
| c. Remedial basic skills instruction in other classes (e.g., English)..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 18/ |
| d. A summer job combined with vocational education..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 19/ |
| e. Enrollment in vocationally-oriented school-within-a-school or alternative school..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 20/ |
| f. A modified vocational curriculum (e.g., simplified language in technical manuals)..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 21/ |
| g. Guidance, counseling and career development activities..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 22/ |
| h. Guidance and counseling on transition to further education or employment..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 23/ |
| i. Other. Specify: _____ | |__|-1 | |__|-2 | |__|-3 | |__|-4 | 24/ |

*Academically disadvantaged refers to a student who scores at or below the 25th percentile on a standardized achievement or aptitude test, whose secondary school grades are below 2.0 on a 4.0 scale, or who fails to attain minimal academic competencies; and who requires special services and assistance to enable them to succeed in vocational education programs. It does not include students with learning disabilities.

Economically Disadvantaged*

16. In 1986-87, were any economically disadvantaged students enrolled in vocational education programs in your district?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 18)..... |__|-2

17. In 1986-87, what proportion of economically disadvantaged students enrolled in vocational education received any of the following supplemental services? (PLEASE CHECK ONE BOX FOR EACH SUPPLEMENTAL SERVICE.)

| Supplemental Services: | Proportion of Economically Disadvantaged Students: ALL | MOST | SOME | NONE |
|---|---|---|---|---|
| a. Assessment of vocational interests, abilities and special needs..... | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |
| b. A summer job combined with vocational education..... | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |
| c. Paid employment through a school-coordinated program (e.g., cooperative vocational education)..... | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |
| d. A stipend or subsidized employment in conjunction with vocational education (e.g., work-study program)..... | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |
| e. Modification of curriculum to accommodate a job during school hours..... | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |
| f. Guidance, counseling and career development activities..... | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |
| g. Guidance and counseling on transition to further education or employment..... | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |
| h. Other. Specify: _____ | \|__\|-1 | \|__\|-2 | \|__\|-3 | \|__\|-4 |

*Economically disadvantaged refers to an individual identified as low income by an indicator such as: annual family income at or below the poverty level established by the Office of Management and Budget, eligibility for free or reduced-price school lunch, or eligibility for Aid to Families with Dependent Children or other public assistance program; and who requires special services and assistance to enable them to succeed in vocational education programs.

Academically and Economically Disadvantaged Students Combined

18. In 1986-87, did the district spend Perkins' Title IIA funds for disadvantaged students?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 21)..... |__|-2 34/

19. What was the total amount of Perkins' Title IIA funds used by the district in 1986-87 to support programs for disadvantaged students?

Disadvantaged Funds Spent in 1986-87: $_____.00 35-41/

20. For the Perkins' funds for disadvantaged students reported in Question 19, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in regular vocational classrooms | _____% | 42-44/ |
| b. Teachers or other staff for separate vocational classes for disadvantaged students | _____% | 45-47/ |
| c. Basic skills instruction in nonvocational classes | _____% | 48-50/ |
| d. Guidance, assessment or counseling | _____% | 51-53/ |
| e. Development or modification of vocational curriculum | _____% | 54-56/ |
| f. Stipends or subsidized employment | _____% | 57-59/ |
| g. Recruitment of out-of-school youth | _____% | 60-62/ |
| h. Employability and/or job search activities | _____% | 63-65/ |
| i. Child care services | _____% | 66-68/ |
| j. Equipment | _____% | 69-71/ |
| k. Other. Specify: _____ | _____% | 72-74/ |
| TOTAL | 100% | |

Limited-English-Proficient Students*

21. In 1986-87, were any limited-English-proficient (LEP) students enrolled in vocational education programs in your district?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 26)..... |__|-2

22. In 1986-87, what proportion of limited-English-proficient students enrolled in vocational education received any of the following supplemental services? (PLEASE CHECK ONE BOX FOR EACH SUPPLEMENTAL SERVICE.)

| Supplemental Services: | Proportion of LEP Students: ALL | MOST | SOME | NONE |
|---|---|---|---|---|
| a. Vocational tutoring or assistance by native speaker outside of regular class..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 |
| b. Assessment of vocational interests, abilities and special needs..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 |
| c. Modified vocational curriculum (e.g., technical manuals in native language)..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 |
| d. Guidance, counseling and career development activities..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 |
| e. Guidance and counseling on transition to further education or employment..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 |
| f. Bilingual basic skills instruction..... | |__|-1 | |__|-2 | |__|-3 | |__|-4 |
| g. Other. Specify: _____ | |__|-1 | |__|-2 | |__|-3 | |__|-4 |

|13-1

*"Limited English Proficiency" refers to individuals whose native language is a language other than English; or who come from an environment where a language other than English is dominant; or who come from an environment where a language other than English has had a significant impact on their level of English proficiency; and who have sufficient difficulty speaking, reading, writing or understanding the English language to deny these students the opportunity to learn successfully in vocational education classes where the language of instruction is English.

Limited-English-Proficient Students (continued)

23. In 1986-87, did your district spend Perkins' Title IIA funds for limited-English-proficient (LEP) students?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 26)..... |__|-2 18/

24. What was the total amount of Perkins' Title IIA funds used by the district in 1986-87 to support programs for limited-English-proficient students?

LEP Funds Spent in 1986-87: $_____.00 19-25/

25. For the Perkins' funds for limited-English-proficient students reported in Question 24, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in regular vocational classrooms | _____% | 26-28/ |
| b. Teachers or other staff for separate vocational classes for LEP students | _____% | 29-31/ |
| c. Tutoring by native speaker outside of vocational classes | _____% | 32-34/ |
| d. Guidance, assessment or counseling | _____% | 35-37/ |
| e. Bilingual vocational curriculum development | _____% | 38-40/ |
| f. Equipment | _____% | 41-43/ |
| g. Employability and/or job search activities | _____% | 44-46/ |
| h. Other. Specify: _____ | _____% | 47-49/ |
| TOTAL | 100% | |

**Single Parent/Homemaker***

26. In 1986-87, did the district spend Perkins' Title IIA funds for single parents/homemakers?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 29)..... |__|-2

27. What was the total amount of Perkins' Title IIA funds used by the district in 1986-87 to support programs for single parents/homemakers? (INCLUDE ALL FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Single Parent/Homemaker Funds Spent in 1986-87: $_____.00

28. For the Perkins' funds for single parents/homemakers reported in Question 27, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds |
|---|---|
| a. Paraprofessionals/aides in vocational classrooms | _____% |
| b. Teachers or other staff for separate vocational classes | _____% |
| c. Custodial or support staff to keep facilities open longer hours | _____% |
| d. Basic skills instruction in nonvocational classes | _____% |
| e. Guidance, assessment or counseling | _____% |
| f. Equipment | _____% |
| g. Student recruitment activities | _____% |
| h. Child care services | _____% |
| i. Transportation | _____% |
| j. Job placement services | _____% |
| k. Other. Specify: _____ | _____% |
| TOTAL | 100% |

|13-

*"Single Parent" refers to an individual who is unmarried or legally separated from a spouse and has a minor child or children for whom the parent has either custody or joint custody. "Homemaker" refers to an individual who is an adult and has worked as an adult primarily without remuneration to care for the home and family, and for that reason has diminished marketable skills.

**Adults***

29. In 1986-87, did the district spend Perkins' Title IIA funds for adults?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 32)..... |__|-2 27/

30. What was the total amount of Perkins' Title IIA funds used by the district in 1986-87 to support programs for adults? (PLEASE INCLUDE FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Funds for Adults Spent in 1986-87: $_____.00 28-34/

31. For the Perkins' funds for adults reported in Question 30, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in vocational classes in school or other settings | _____% | 35-37/ |
| b. Teachers or other staff for separate vocational classes in school or other settings | _____% | 38-40/ |
| c. Custodial or support staff to keep facilities open longer hours | _____% | 41-43/ |
| d. Basic skills instruction in non-vocational classes | _____% | 44-46/ |
| e. Guidance, assessment or counseling | _____% | 47-49/ |
| f. Equipment | _____% | 50-52/ |
| g. Student recruitment activities | _____% | 53-55/ |
| h. Child care services | _____% | 56-58/ |
| i. Transportation | _____% | 59-61/ |
| j. Job placement services | _____% | 62-64/ |
| k. Other. Specify: _____ | _____% | 65-67/ |
| | TOTAL 100% | |

"Adults" include individuals who have graduated from or left high school and who need additional vocational education for entry into the labor force; unemployed individuals who require training to obtain employment or increase their employability; or employed individuals who require retraining to retain their jobs or training to upgrade their skills to qualify for higher paid or more dependable employment.

Sex Equity*

32. In 1986-87, did the district spend Perkins' Title IIA funds for sex equity?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 35)..... |__|-2

33. What was the total amount of Perkins' Title IIA funds used by the district in 1986-87 to support sex equity programs? (PLEASE INCLUDE FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Sex Equity Funds Spent in 1986-87: $_____.00

34. For the Perkins' sex equity funds reported in Question 33, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds |
|---|---|
| a. Inservice staff development in sex equity | _____% |
| b. Development or modification of vocational curriculum | _____% |
| c. Active recruitment of students to nontraditional fields | _____% |
| d. Salaries for staff to provide programs targeted to increase participation in nontraditional fields | _____% |
| e. Counseling and career development activities in nontraditional fields | _____% |
| f. Job placement services in non-traditional fields | _____% |
| g. Child care services | _____% |
| h. Transportation | _____% |
| i. Other. Specify: _____ | _____% |
| TOTAL | 100% |

|13-

*"Sex Equity" refers to programs, services and activities designed to eliminate sex bias and stereotyping of career options and educational programs.

**Sex Equity** (continued)

35. In 1986-87, did your district expend funds from other sources (i.e., non-Perkins' funds) on any specific activities to promote sex equity in vocational education?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 37)..... |__|-2

36. Please indicate below the types of activities undertaken. (PLEASE CHECK THE BOX INDICATING "YES" OR "NO" FOR EACH ACTIVITY.)

| | YES | NO | |
|---|---|---|---|
| a. Information to students to counteract stereotypes..... | |__|-1 | |__|-2 | 4 |
| b. Inservice staff development in sex equity..... | |__|-3 | |__|-4 | 4 |
| c. Adoption of bias-free curriculum materials..... | |__|-1 | |__|-2 | 4 |
| d. Active recruitment of students to nontraditional fields..... | |__|-3 | |__|-4 | 4 |
| e. Vocational education programs designed for students in nontraditional fields for their gender (e.g., women in fire-fighting program)..... | |__|-1 | |__|-2 | 4 |
| f. Hiring or placement of faculty in nontraditional fields for their gender..... | |__|-3 | |__|-4 | 4 |
| g. Counseling and career development activities in nontraditional fields..... | |__|-1 | |__|-2 | 4 |
| h. Specific job placement activities in nontraditional fields..... | |__|-3 | |__|-4 | 4 |
| i. Opportunity to meet individuals employed in fields nontraditional for their gender..... | |__|-1 | |__|-2 | 4 |
| j. Other. Specify: _____ _____ | |__|-3 | |__|-4 | 4 |

PROGRAM IMPROVEMENT, INNOVATION AND EXPANSION

37. In 1986-87, did your district spend Perkins' Title IIB funds for program improvement, innovation and expansion?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 40)..... |__|-2

38. What was the total amount of Perkins' Title IIB funds used by the district in 1986-87 for program improvement? (PLEASE INCLUDE FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Program Improvement Funds Spent in 1986-87: $_____.00 51

39. For the Perkins' funds for program improvement reported in Question 38, please estimate the percentage of funds spent on each activity below. Activities listed below summarize the examples appearing in the law.

| | Percentage of Funds | |
|---|---|---|
| a. Established industry-education partnership agreements | _____% | 58- |
| b. Hired staff for new or expanded program | _____% | 61- |
| c. Inservice and preservice training | _____% | 64- |
| d. Expanded counseling and guidance services | _____% | 67- |
| e. Instituted development of new or modified curriculum | _____% | 70- |
| f. Purchased new equipment | _____% | 73- |
| g. Renovated or expanded facilities | _____% | 76- |
| | | 13-14/ |
| h. Arranged an articulation agreement with a postsecondary institution | _____% | 15- |
| i. Other. Specify: _____ | _____% | 18- |
| TOTAL | 100% | |

UNSPENT FUNDS

40. If you were awarded Perkins' Title IIA Handicapped or Disadvantaged funds in 1986-87, please indicate below the dollar amount of these funds: (a) carried over into 1987-88, and (b) returned to the state in 1986-87.

| | a. Funds carried over into 1987-88 | | b. Funds returned to the state in 1986-87 | |
|---|---|---|---|---|
| Handicapped: | $ _____.00 | 21-26/ | $ _____.00 | 27-3 |
| Disadvantaged | $ _____.00 | 33-38/ | $ _____.00 | 39-4 |

(IF YOU HAD NO UNSPENT FUNDS IN EITHER CATEGORY, GO TO QUESTION 42.)

41. If the district had unspent Title IIA Handicapped or Disadvantaged funds in 1986-87, what were the primary reasons for not spending these monies? (CHECK ALL THAT APPLY.)

| Reasons for Not Spending Title IIA Funds in 1986-87: | Disadvantaged | Handicapped | |
|---|---|---|---|
| a. Program(s) did not start on time..... | ☐-1 | ☐-1 | 45-46 |
| b. Underenrollment of students..... | ☐-2 | ☐-2 | 47-48 |
| c. Accounting procedures too complex to demonstrate excess costs..... | ☐-3 | ☐-3 | 49-50 |
| d. Sufficient matching funds not available..... | ☐-4 | ☐-4 | 51-52 |
| e. Did not know what matching funds were available..... | ☐-1 | ☐-1 | 53-54 |
| f. Actual costs lower than original budget..... | ☐-2 | ☐-2 | 55-56 |
| g. Other. Specify: _____ | ☐-6 | ☐-6 | 57-58 |

FUNDS NOT AWARDED

42. In 1986-87, were you awarded funds in all categories of Perkins' Title II monies?

Yes (GO TO QUESTION 44)..... |__|-1

No (CONTINUE)..... |__|-2

43. If you did not receive Perkins' Title II funds in a particular category, what were the most important reasons why you did not receive these funds? (FOR EACH PROGRAM CATEGORY LISTED BELOW, PLEASE CHECK THE MOST IMPORTANT REASONS WHY YOU DID NOT RECEIVE FUNDS.)

| Reason Funds Not Received | Handicapped | Disadvantaged | Single Parent/ Homemaker | Sex Equity | Adult | Program Improvement | |
|---|---|---|---|---|---|---|---|
| Did not know about program..... | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | 60- |
| Not eligible for funds in this category..... | \|__\|-2 | \|__\|-2 | \|__\|-2 | \|__\|-2 | \|__\|-2 | \|__\|-2 | 66- |
| Application rejected..... | \|__\|-3 | \|__\|-3 | \|__\|-3 | \|__\|-3 | \|__\|-3 | \|__\|-3 | 72- |
| Did not apply: likely award not large enough to make it worthwhile..... | \|__\|-4 | \|__\|-4 | \|__\|-4 | \|__\|-4 | \|__\|-4 | \|__\|-4 | 13-14/ 15- |
| Did not apply: did not know what funds were available as matching funds..... | \|__\|-1 | \|__\|-1 | \|///\| | \|///\| | \|__\|-1 | \|__\|-1 | 21- |
| Did not apply: could not identify eligible students..... | \|__\|-2 | \|__\|-2 | \|///\| | \|///\| | \|///\| | \|///\| | 25- |
| Did not apply: could not meet matching of excess costs requirement..... | \|__\|-3 | \|__\|-3 | \|///\| | \|///\| | \|///\| | \|///\| | 27- |
| Did not apply: could not identify the excess costs..... | \|__\|-4 | \|__\|-4 | \|///\| | \|///\| | \|///\| | \|///\| | 29- |
| Did not apply: staff or other resources were insufficient to prepare proposals..... | \|///\| | \|///\| | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | 31- |
| Other. Specify: _____ _____ | \|__\|-6 | \|__\|-6 | \|__\|-6 | \|__\|-6 | \|__\|-6 | \|__\|-6 | 35- |

## CHANGES IN VOCATIONAL EDUCATION PROGRAMS

In this section, we are interested in several types of changes in vocational education programs: changes in enrollment (Q. 44-48); changes in the number of sections or courses offered (Q. 49-51); and changes in course content, supplemental services or other program activities (Q. 52). Please consider all vocational programs, not just those funded with federal monies.

### Enrollment Changes

44. Over the last 5 years (i.e., 1982-83 through 1986-87), has the number of handicapped students enrolled in vocational education changed in your district? (PLEASE CIRCLE THE CATEGORY BELOW THAT BEST DESCRIBES CHANGES IN HANDICAPPED VOCATIONAL EDUCATION ENROLLMENT IN YOUR DISTRICT OVER THE LAST 5 YEARS.)

| Large Decrease (> 20%) | Moderate Decrease (11-20%) | No or Minimal Change (± 10%) | Moderate Increase (11-20%) | Large Increase (> 20%) | |
|---|---|---|---|---|---|
| -2 | -1 | 0 | +1 | +2 | 41-42 |

45. Over the last 5 years (i.e., 1982-83 through 1986-87), has the number of academically or economically disadvantaged students enrolled in vocational education changed in your district? (PLEASE CIRCLE THE CATEGORY BELOW THAT BEST DESCRIBES CHANGES IN DISADVANTAGED VOCATIONAL EDUCATION ENROLLMENT IN YOUR DISTRICT OVER THE LAST 5 YEARS.)

| Large Decrease (> 20%) | Moderate Decrease (11-20%) | No or Minimal Change (± 10%) | Moderate Increase (11-20%) | Large Increase (> 20%) | |
|---|---|---|---|---|---|
| -2 | -1 | 0 | +1 | +2 | 43-44 |

46. Over the last 5 years (i.e., 1982-83 through 1986-87), has the total vocational education enrollment changed in your district? (PLEASE CIRCLE THE CATEGORY BELOW THAT BEST DESCRIBES THE TOTAL VOCATIONAL EDUCATION ENROLLMENT IN YOUR DISTRICT OVER THE LAST 5 YEARS.)

| Large Decrease (> 20%) | Moderate Decrease (11-20%) | No or Minimal Change (± 10%) | Moderate Increase (11-20%) | Large Increase (> 20%) | |
|---|---|---|---|---|---|
| -2 | -1 | 0 | +1 | +2 | 45-46 |

(IF INCREASE OR NO CHANGE IN TOTAL ENROLLMENTS, GO TO QUESTION 48.)

Enrollment Changes (continued)

47. If the total vocational education enrollments have decreased over the last five years, what factors do you feel are related to this decline? (CHECK THE BOX THAT INDICATES THE EXTENT TO WHICH YOU FEEL EACH FACTOR IS RELATED TO THE DECLINE IN VOCATIONAL EDUCATION ENROLLMENTS.)

| Related to Enrollment Decline: | Strongly Related | Somewhat Related | Not Related |
|---|---|---|---|
| a. Minimum competency test required for graduation..... | ☐-1 | ☐-2 | ☐-3 |
| b. Increase in core course requirements for graduation..... | ☐-4 | ☐-5 | ☐-6 |
| c. Increase in other graduation requirements..... | ☐-1 | ☐-2 | ☐-3 |
| d. Academic diploma/certificate required for graduation in addition to standard diploma..... | ☐-4 | ☐-5 | ☐-6 |
| e. Overall decrease in district enrollments..... | ☐-1 | ☐-2 | ☐-3 |
| f. Decline in student interest in vocational education..... | ☐-4 | ☐-5 | ☐-6 |
| g. Less parental support for vocational education..... | ☐-1 | ☐-2 | ☐-3 |
| h. Declining job placement rates..... | ☐-4 | ☐-5 | ☐-6 |
| i. Shortened school day..... | ☐-1 | ☐-2 | ☐-3 |
| j. Reduced support or guidance from district administration..... | ☐-4 | ☐-5 | ☐-6 |
| k. Other. Specify: _____ _____ | ☐-1 | ☐-2 | ☐-3 |

**Enrollment Changes** (continued)

48. For each program area listed below, please indicate what changes have occurred in total vocational education enrollments over the last 5 years (i.e., 1982-83 through 1986-87). Enrollment should be considered changed only if there has been more than a 10% increase or decrease. (PLEASE CHECK THE BOX THAT INDICATES YOUR RESPONSE FOR EACH PROGRAM AREA.)

| Program Area | PROGRAM OFFERED IN LAST 5 YEARS: Overall Enrollment Increase | Overall Enrollment Decrease | No Change | PROGRAM NOT OFFERED IN LAST 5 YEARS | |
|---|---|---|---|---|---|
| Vocational Agriculture..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 58 |
| Business and Office..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 59 |
| Consumer and Homemaking*..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 60 |
| Distributive Ed./Marketing..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 61 |
| Health..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 62 |
| Technical..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 63 |
| Trades and Industry..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 64 |

*Includes occupational home economics.

## Course Offerings

49. On the following chart, please indicate what increases or decreases have occurred in the number of vocational education course offerings over the last 5 years (i.e., 1982-83 through 1986-87). A program should be considered reduced or expanded only if there has been more than a 10% increase or decrease in the number of teaching personnel or in the number of sections or classes offered. (PLEASE CHECK THE BOX THAT INDICATES YOUR RESPONSE FOR EACH PROGRAM AREA.)

| | PROGRAM OFFERED IN LAST 5 YEARS | | | |
|---|---|---|---|---|
| Program Area | Program Expanded | Program Reduced | No Change | PROGRAM NOT OFFERED IN LAST 5 YEARS |
| Vocational Agriculture..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Business and Office..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Consumer and Homemaking*..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Distributive Ed./Marketing..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Health..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Technical..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Trades and Industry..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |

*Includes occupational home economics.

IF THERE WERE NO CHANGES IN ANY OF THESE PROGRAM AREAS, PLEASE GO TO QUESTION 52.

Course Offerings (continued)

50. What were the most important reasons for program expansion in each of the areas indicated on Question 49? (PLEASE CHECK THE MOST IMPORTANT REASONS THAT APPLY FOR EACH PROGRAM AREA.)

| Most Important Reasons for Program Expansion | Area of Program Expansion: Voc. Ag. | Bus. Offc. | C & H | Distr. Markt. | Health | Tech. | Trade/ Indus. | |
|---|---|---|---|---|---|---|---|---|
| Greater student interest in program..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 72-7<br>13-14/0 |
| Additional federal funds: Perkins Act..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 15-2 |
| Additional federal funds: other sources..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | 22-2 |
| Additional state funding..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | 29-3 |
| Additional local funding..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 36-4 |
| Desire to meet increased labor market demand..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 43-4 |
| New state or district policy (e.g., all students must take a career exploration course)..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | 50-5 |
| Overall increase in vocational ed. enrollments..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | 57-6 |
| Program no longer offered at another institution..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 64-7 |
| Request by employers or PIC (JTPA)..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 71-77<br>13-14/10 |
| Other. Specify: _____ _____ | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | 15-21 |

Course Offerings (continued)

51. What were the most important reasons for reducing or discontinuing programs in each of the areas indicated in Question 49? (PLEASE CHECK THE MOST IMPORTANT REASONS THAT APPLY FOR EACH PROGRAM AREA.)

| Most Important Reasons for Program Reduction | Area of Program Reduction: Voc. Ag. | Bus. Offc. | C & H | Distr. Markt. | Health | Tech. | Trade/ Indus. | |
|---|---|---|---|---|---|---|---|---|
| Decreased student interest in program..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 22 |
| Decreased federal funds: Perkins Act..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 29 |
| Decreased federal funds: other sources..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | 36 |
| Decreased state funding..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | 43 |
| Decreased local funding..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 50 |
| Program started or expanded at another institution..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 57 |
| Loss of appropriate teachers without replacement.... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | 64 |
| Difficulty placing students in jobs for which they were trained..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | 71 / 13-14/ |
| Students found course too difficult..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 15 |
| Overall decrease in vocational ed. enrollments..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 22 |
| Other. Specify: _____ _____ | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | 29 |

## Course Content, Supplemental Services and Other Program Activities

52. On the following chart, please indicate what changes in course content, supplemental services or other program activities in vocational education have occurred over the past 5 years (i.e., 1982-83 through 1986-87).

| | OFFERED IN LAST 5 YEARS | | | | |
|---|---|---|---|---|---|
| | Added or Expanded | Reduced or Discontinued | No Change | NOT OFFERED IN LAST 5 YEARS | |
| General or transferable vocational skills courses (e.g., Principles of Technology)..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 3( |
| Specific occupational skills training..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 3' |
| Remedial basic skills instruction..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 3( |
| Integrated math and science curriculum..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 3( |
| Work experience programs..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 4( |
| Career exploration..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 41 |
| Responses to advances in technology..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 42 |
| Assessment of interests and abilities in vocational education..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 43 |
| Vocational guidance/counseling..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 44 |
| Supplemental services for handicapped or disadvantaged students..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 45 |
| Activities to promote sex equity..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 46 |
| Articulation agreements with postsecondary institutions for credit or advanced placement ..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 47 |
| Integrated curriculum offerings with postsecondary institution..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 48 |
| Student leadership programs (e.g., FFA)..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 49 |
| Job placement activities..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 50 |
| Other: _____ _____ | ☐-1 | ☐-2 | ☐-3 | ☐-4 | 51 |

## VOCATIONAL EDUCATION AND THE JOB TRAINING PARTNERSHIP ACT (JTPA)

53. In 1986-87, did your district receive JTPA funds?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 56)..... |__|-2

54. Please write in the amount of each award below. (If no funds were received, write in "0".)

| | | |
|---|---|---|
| JTPA Title IIA Funds (Block Grant) | $ _____.00 | 53 |
| JTPA Title IIB Funds (Summer Youth) | $ _____.00 | 61 |
| JTPA Title III Funds (Dislocated Workers) | $ _____.00 | 69 |
| | | \|13-14 |
| 8% Coordination Grants | $ _____.00 | 15 |
| Other JTPA Funds | $ _____.00 | 23 |
| Total JTPA Funds Received | $ _____.00 | 31 |

55. Were any of these funds used in activities related to vocational education?

Yes..... |__|-1

No..... |__|-2

56. Does your institution accept funds that require recipients to meet performance objectives (e.g., performance-based contracts)?

Yes..... |__|-1

No..... |__|-2

57. If your institution does not accept funds because of performance objectives, what are the primary reasons for not accepting these funds? (CHECK ALL THAT APPLY.)

Reasons for Not Accepting Performance-Based Funding

a. Institutional policy..... |__|-1

b. Not consulted about testing of performance standards..... |__|-2

c. Performance standards are unrealistic..... |__|-3

d. Magnitude of award not worth the risk if performance standards not met..... |__|-4

e. Other. Please specify:

_____ |__|-6

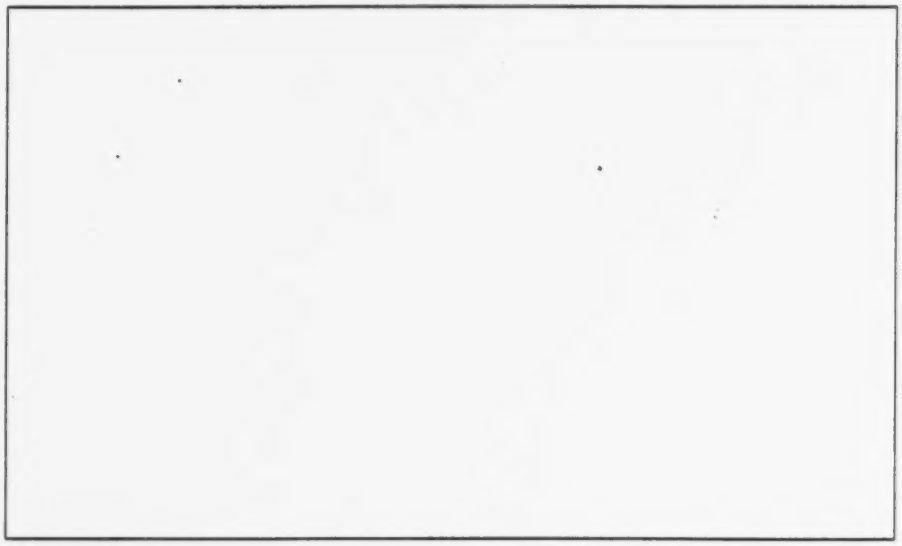
_____

ADDITIONAL COMMENTS:

THANK YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE.

PLEASE RETURN THE QUESTIONNAIRE TO ABT ASSOCIATES IN THE POSTAGE-PAID ENVELOPE PROVIDED.

# Survey of Vocational Education Practices in Postsecondary Institutions



***This survey is part of a study sponsored by the National Assessment of Vocational Education. We appreciate your cooperation with this part of the Congressionally-mandated study of vocational education. It is the first national survey of its kind in almost a decade.***

Please take time now to answer all the questions and return the questionnaire in the enclosed envelope to:

Abt Associates Inc.
Survey of Vocational Education Practices
55 Wheeler Street
Cambridge, MA 02138-9990

While your cooperation is essential to the success of this project, if you choose not to participate it will not affect your present or future federal funding.

Identification Number: |_|_|_|_|_|_|



## DIRECTIONS

This survey is being conducted for the National Assessment of Vocational Education (NAVE) as part of a Congressionally-mandated study to obtain information about vocational education from a national sample of postsecondary institutions. This information will be used to prepare a report to Congress on vocational education funding and services since the passage of the Carl D. Perkins Vocational Education Act.

If you would like to receive a summary of the survey results, please check here |__|-1 and make any necessary corrections to the mailing address shown on the survey cover.

This questionnaire is a survey of vocational education in postsecondary institutions. We are interested in all postsecondary vocational education in your institution, including short-term training as well as degree and certificate programs.

- If your institution offers both secondary and postsecondary programs, consider only the postsecondary programs in your responses to this survey.
- If your institution has multiple campuses under the same administration, please include information about all campuses combined.
- If your institution has multiple campuses each with its own administration, please include information only about your campus.

For the purposes of this study, vocational education is broadly defined. It includes programs in:

| | |
|---|---|
| agri-business | business/office |
| health | home economics |
| marketing/distribution | technical training |
| trades and industry | |

If your institution does not directly offer any vocational education programs, please check here |__| and return the questionnaire without completing it.

If you are not in the best position to answer questions about vocational education services and funding, please forward this questionnaire to the most appropriate person in your institution.

Please feel free to call Janet Swartz, Survey Director, at (617) 492-7100, if you have any questions.

Thank you for your time and cooperation.

## GENERAL INSTITUTION INFORMATION

In this section, we are interested in general descriptive information about the institution and its overall educational policies.

1. Your institution is best described as a (CHECK ONLY ONE CATEGORY):

| | Public | Private |
|---|---|---|
| a. Community or junior college (i.e., offering academic transfer and vocational education)..... | ☐-1 | ☐-2 |
| b. Four-year institution offering associate degrees or certificates..... | ☐-3 | ☐-4 |
| c. Vocational technical institute or college..... | ☐-5 | ☐-6 |
| d. Area or regional vocational school offering postsecondary education (e.g., AVTI or AVC)..... | ☐-7 | ☐-8 |
| e. Other. Specify: _____ _____ | ☐-9 | ☐-0 |

2. Please indicate below the primary mission of your institution. (CHECK ONLY ONE BOX.)

The institution is:

| | |
|---|---|
| a. Primarily designed for students to transfer to four year colleges..... | ☐-1 |
| b. Primarily designed for students to complete occupational education programs..... | ☐-2 |
| c. An equal balance between transfer programs and occupational education programs..... | ☐-3 |
| d. Other. Specify: _____ _____ | ☐-6 |

3. Of the following choices, what are the 3 most important goals for vocational education in your institution? (Rank the most important goal as "1", the next most important as "2" and the third most important as "3".)

| Goal of Vocational Education | Rank |
|---|---|
| Promote access to vocational education for disadvantaged and handicapped students | ___ |
| Prepare students for specific occupations | ___ |
| Impart general employability skills | ___ |
| Enhance students' awareness of various occupational areas | ___ |
| Prepare students for further education in four-year institutions | ___ |
| Prepare students for transfer to other technical training | ___ |
| Ensure that students master basic skills | ___ |
| Stimulate economic development | ___ |
| Meet the needs of specific employers or unions (e.g., customized training) | ___ |
| Other. Please specify: _____ | ___ |

4. In 1982-83 and 1986-87, what was the total postsecondary student enrollment in your institution, both actual number (i.e., "head count") and full-time equivalency (FTE)?

| | 1982-83 | | 1986-87 | |
|---|---|---|---|---|
| Total Number of Students Enrolled (i.e., "head count") | _____ | 28-32/ | _____ | 33 |
| Total FTE Postsecondary Enrollment | _____ | 38-42/ | _____ | 43 |

5. In 1986-87, what was the total budget for your institution?

Total Institution Budget: $ _____.00 48

6. In 1986-87, what was the number of full-time and part-time faculty teaching at your institution overall and in vocational courses? (For the count of vocational faculty, please include faculty in each of the following areas: agri-business, business/office, health, home economics, marketing/distribution, technical, and trades/industry.)

| | Number of Faculty | | | |
|---|---|---|---|---|
| | Full-Time | | Part-Time | |
| Total Faculty..... | _____ | 56-59/ | _____ | 60 |
| Vocational Education Faculty..... | _____ | 64-67/ | _____ | 68 |

7. During 1986-87, did your institution provide vocational education programs in conjunction with other agencies?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 9)..... |__|-2

8. In 1986-87, how many students were involved in vocational programs that you ran in cooperation with other agencies? (FOR EACH AGENCY LISTED, PLEASE WRITE IN THE NUMBER OF STUDENTS INVOLVED.)

| | Number of Students | |
|---|---|---|
| a. Welfare agencies | _____ | 73 |
| b. Private Industry Councils or others connected with the Job Training Partnership Act (JTPA) | _____ | 77 |
| | | 12-13 |
| c. Vocational rehabilitation agencies | _____ | 14 |
| d. Employers (for customized training) | _____ | 18 |
| e. Public housing authorities | _____ | 22 |
| f. Community-based organizations | _____ | 26 |
| g. State employment services | _____ | 30 |
| h. Other employment services | _____ | 34 |
| i. School districts (through articulation agreements) | _____ | 38 |
| j. Unions | _____ | 42 |
| k. Economic development or commerce agencies | _____ | 46 |
| l. Other human service agencies. Specify: _____ | _____ | 50 |
| m. Other agencies. Specify: _____ | _____ | 54 |

9. During 1986-87, did your institution provide targeted recruitment or outreach activities for vocational education programs?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 11)..... |__|-2

10. Please check all groups for whom targeted outreach activities were undertaken.

a. Displaced or dislocated workers..... |__|-1

b. Welfare recipients..... |__|-2

c. Single parents/homemakers..... |__|-3

d. High school dropouts..... |__|-4

e. Handicapped students..... |__|-1

f. Limited-English-proficient students..... |__|-2

g. Disadvantaged students..... |__|-3

h. High school seniors..... |__|-4

i. High school graduates..... |__|-1

j. College graduates..... |__|-2

k. Senior citizens..... |__|-3

l. Other. Specify:

_____ |__|-6

## CHANGES IN VOCATIONAL EDUCATION PROGRAMS

In this section, we are interested in several types of changes in vocational education programs: changes in enrollment (Q. 11-16); changes in the number of sections or courses offered (Q. 17-19); and changes in course content, supplemental services or other program activities (Q. 20). Please consider all vocational programs, not just those funded with federal monies.

### Enrollment Changes

11. Over the last 5 years (i.e., 1982-83 through 1986-87), has the number of handicapped* students enrolled in vocational education changed in your institution? (PLEASE CIRCLE THE CATEGORY BELOW THAT BEST DESCRIBES CHANGES IN HANDICAPPED VOCATIONAL EDUCATION ENROLLMENT IN YOUR INSTITUTION OVER THE LAST 5 YEARS.)

| Large Decrease (> 20%) | Moderate Decrease (11-20%) | No or Minimal Change (± 10%) | Moderate Increase (11-20%) | Large Increase (> 20%) | |
|---|---|---|---|---|---|
| -2 | -1 | 0 | +1 | +2 | 7 |

12. Over the last 5 years (i.e., 1982-83 through 1986-87), has the number of disadvantaged** students enrolled in vocational education changed in your institution? (PLEASE CIRCLE THE CATEGORY BELOW THAT BEST DESCRIBES CHANGES IN DISADVANTAGED VOCATIONAL EDUCATION ENROLLMENT IN YOUR INSTITUTION OVER THE LAST 5 YEARS.)

| Large Decrease (> 20%) | Moderate Decrease (11-20%) | No or Minimal Change (± 10%) | Moderate Increase (11-20%) | Large Increase (> 20%) | |
|---|---|---|---|---|---|
| -2 | -1 | 0 | +1 | +2 | 7 |

*"Handicapped" refers to both physical and mental handicapping conditions. Handicapped students include students who are mentally retarded, hard of hearing, deaf, speech or language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or persons with specific learning disabilities; and who require special services and assistance in order to enable them to succeed in vocational education programs.

**Disadvantaged includes both academically and economically disadvantaged students who require special services and assistance to enable them to succeed in vocational education programs. Academically disadvantaged refers to a student who scores at or below the 25th percentile on a standardized achievement or aptitude test; whose grades are below 2.0 on a 4.0 scale; or who fails to attain minimal academic competencies. It does not include students with learning disabilities. Economically disadvantaged refers to an individual identified as low income by an indicator such as: annual family income at or below the poverty level established by the Office of Management and Budget; eligibility for AFDC or other public assistance program; or eligibility for Pell Grants.

Enrollment Changes (continued)

13. Over the last 5 years (i.e., 1982-83 through 1986-87), has the total vocational education enrollment changed in your institution? (PLEASE CIRCLE THE CATEGORY BELOW THAT BEST DESCRIBES THE TOTAL VOCATIONAL EDUCATION ENROLLMENT IN YOUR INSTITUTION OVER THE LAST 5 YEARS.)

| Large Decrease (> 20%) | Moderate Decrease (11-20%) | No or Minimal Change (± 10%) | Moderate Increase (11-20%) | Large Increase (> 20%) | |
|---|---|---|---|---|---|
| -2 | -1 | 0 | +1 | +2 | 7 |

(IF NO CHANGE IN TOTAL ENROLLMENT, GO TO QUESTION 17.)

12-1

14. If the total vocational education enrollments have increased over the last five years, what factors do you feel are related to this increase? (CHECK THE BOX THAT INDICATES THE EXTENT TO WHICH YOU FEEL EACH FACTOR IS RELATED TO THE INCREASE IN VOCATIONAL EDUCATION ENROLLMENTS.)

| Related to Enrollment Increase: | Strongly Related | Somewhat Related | Not Related |
|---|---|---|---|
| a. Overall increase in institution enrollments..... | ☐ -1 | ☐ -2 | ☐ -3 |
| b. Increase in student interest in vocational education..... | ☐ -4 | ☐ -5 | ☐ -6 |
| c. Local economic growth..... | ☐ -1 | ☐ -2 | ☐ -3 |
| d. Increased recruitment activities..... | ☐ -4 | ☐ -5 | ☐ -6 |
| e. Change in state policy towards vocational education..... | ☐ -1 | ☐ -2 | ☐ -3 |
| f. Change in institutional policy towards vocational education..... | ☐ -4 | ☐ -5 | ☐ -6 |
| g. Increase in unemployment..... | ☐ -1 | ☐ -2 | ☐ -3 |
| h. Increase in available student financial aid..... | ☐ -4 | ☐ -5 | ☐ -6 |
| i. Increase in employment and training funds..... | ☐ -1 | ☐ -2 | ☐ -3 |
| j. Other. Specify: _____ _____ | ☐ -4 | ☐ -5 | ☐ -6 |

**Enrollment Changes** (continued)

15. If the total vocational education enrollments have decreased over the last five years, what factors do you feel are related to this decline? (CHECK THE BOX THAT INDICATES THE EXTENT TO WHICH YOU FEEL EACH FACTOR IS RELATED TO THE DECLINE IN VOCATIONAL EDUCATION ENROLLMENTS.)

| Related to Enrollment Decline: | Strongly Related | Somewhat Related | Not Related |
|---|---|---|---|
| a. Overall decrease in institution enrollments..... | ☐-1 | ☐-2 | ☐-3 |
| b. Decline in student interest in vocational education..... | ☐-4 | ☐-5 | ☐-6 |
| c. Local economic growth..... | ☐-1 | ☐-2 | ☐-3 |
| d. Change in state policy towards vocational education..... | ☐-4 | ☐-5 | ☐-6 |
| e. Change in institutional policy towards vocational education..... | ☐-1 | ☐-2 | ☐-3 |
| f. Decrease in available student aid..... | ☐-4 | ☐-5 | ☐-6 |
| g. Decrease in number of students coming directly from high school..... | ☐-1 | ☐-2 | ☐-3 |
| h. Increase in unemployment..... | ☐-4 | ☐-5 | ☐-6 |
| i. Other. Specify: _____ _____ | ☐-1 | ☐-2 | ☐-3 |

Enrollment Changes (continued)

16. For each program area listed below, please indicate what changes have occurred in total vocational education enrollments over the last 5 years (i.e., 1982-83 through 1986-87). Enrollment should be considered changed only if there has been more than a 10% increase or decrease. (PLEASE CHECK THE BOX THAT INDICATES YOUR RESPONSE FOR EACH PROGRAM AREA.)

| | PROGRAM OFFERED IN LAST 5 YEARS | | | |
|---|---|---|---|---|
| Program Area | Overall Enrollment Increase | Overall Enrollment Decrease | No Change | PROGRAM NOT OFFERED IN LAST 5 YEARS |
| Agri-Business..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Business and Office..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Health..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Home Economics..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Marketing/ Distribution..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Technical..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Trades and Industry..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |

## Course Offerings

17. On the following chart, please indicate what increases or decreases have occurred in the number of vocational education course offerings over the last 5 years (i.e., 1982-83 through 1986-87). A program should be considered reduced or expanded only if there has been more than a 10% increase or decrease in the number of teaching personnel or in the number of sections or classes offered. (PLEASE CHECK THE BOX THAT INDICATES YOUR RESPONSE FOR EACH PROGRAM AREA.)

| | PROGRAM OFFERED IN LAST 5 YEARS | | | |
|---|---|---|---|---|
| Program Area | Program Expanded | Program Reduced | No Change | PROGRAM NOT OFFERED IN LAST 5 YEARS |
| Agri-Business..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Business/ Office..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Health..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Home Economics..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Marketing/ Distribution..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Technical..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Trades and Industry..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |

IF THERE WERE NO CHANGES IN ANY OF THESE PROGRAM AREAS, PLEASE GO TO QUESTION 20.

Course Offerings (continued)

18. What were the most important reasons for program expansion in each of the areas indicated on Question 17? (PLEASE CHECK THE MOST IMPORTANT REASONS THAT APPLY FOR EACH PROGRAM AREA.)

| Most Important Reasons for Program Expansion | Area of Program Expansion: Agr. | Bus./ Office | Health | Home Econ. | Markt./ Distr. | Tech. | Trades/ Indus. | |
|---|---|---|---|---|---|---|---|---|
| Greater student interest in program..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 47 |
| Additional federal funds: Perkins Act..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 54 |
| Additional federal funds: other sources..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | 61 |
| Additional state funding..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | 68 \| 12-13 |
| Additional local funding..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 14 |
| Desire to meet increased labor market demand..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 21 |
| Overall increase in vocational ed. enrollments..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | 28 |
| Program no longer offered at another institution..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | 35 |
| Request by PIC (JTPA)..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 42 |
| Introduction of customized training..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | 49 |
| Shift to shorter programs (e.g., 6 mos.)..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | 56 |
| More flexible entry, exit or scheduling policies..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | 63 |
| Request by employers..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | 70 \| 12-13 |
| Other. Specify: _____ _____ | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | 14 |

**Course Offerings** (continued)

19. What were the most important reasons for reducing or discontinuing programs in each of the areas indicated in Question 17? (PLEASE CHECK THE MOST IMPORTANT REASONS THAT APPLY FOR EACH PROGRAM AREA.)

| Most Important Reasons for Program Reduction | Area of Program Reduction: Agr. | Bus./ Office | Health | Home Econ. | Markt./ Distr. | Tech. | Trades/ Indus. | |
|---|---|---|---|---|---|---|---|---|
| Decreased student interest in program..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | |
| Decreased federal funds: Perkins Act..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | |
| Decreased federal funds: other sources..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | |
| Decreased state funding..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | |
| Decreased local funding..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | |
| Competing program at another institution..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | |
| Loss of appropriate teachers without replacement.... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | |
| Difficulty placing students in jobs for which they were trained..... | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | ☐-4 | |
| Students found course too difficult..... | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | ☐-1 | |
| Overall decrease in vocational ed. enrollments..... | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | ☐-2 | |
| Decreased labor market demand..... | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | ☐-3 | |
| Other. Specify: _____ _____ | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | ☐-6 | |

## Course Content, Supplemental Services and Other Program Activities

20. On the following chart, please indicate what changes in course content, supplemental services or other program activities in vocational education have occurred over the past 5 years (i.e., 1982-83 through 1986-87).

| | OFFERED IN LAST 5 YEARS | | | |
|---|---|---|---|---|
| | Added or Expanded | Reduced or Discontinued | No Change | NOT OFFERED IN LAST 5 YEARS |
| General vocational courses..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Specific occupational skills training..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Remedial basic skills instruction (e.g., reading lab)..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Customized training for industry..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Contracting with other post-secondary institutions to provide voc. ed. jointly..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Competency-based curricula..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Responses to advances in technology..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Vocational guidance, counseling or assessment of student interests.... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Supplemental services for handicapped or disadvantaged students..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Activities to promote sex equity..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Articulation agreements with secondary schools for credit or advanced placement ..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Integrated curriculum offerings with secondary schools (e.g., 2 + 2 programs)..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Upgrading of employment skills for out-of-school youth..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Business assistance programs..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Job placement activities..... | ☐-1 | ☐-2 | ☐-3 | ☐-4 |
| Other: _____ | ☐-1 | ☐-2 | ☐-3 | ☐-4 |

## PROGRAM IMPROVEMENT, INNOVATION AND EXPANSION

21. In 1986-87, did the institution spend Perkins' Title IIB funds for program improvement, innovation and expansion?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 24)..... |__|-2

22. What was the total amount of Perkins' Title IIB funds used by the institution in 1986-87 for program improvement? (PLEASE INCLUDE FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Program Improvement Funds Spent in 1986-87: $_____.00 59

23. For the Perkins' funds for program improvement reported in Question 22, please estimate the percentage of funds spent on each activity below. Activities listed below summarize the examples appearing in the law.

| | Percentage of Funds | |
|---|---|---|
| a. Hired staff for new or expanded program | _____% | 66 |
| b. Inservice and preservice training | _____% | 69 |
| c. Expanded counseling and guidance services | _____% | 72 |
| d. Instituted development of new or modified curriculum | _____% | 75 |
| e. Purchased new equipment | _____% | 78 |
| f. Renovated or expanded facilities | _____% | 12-13 14 |
| g. Arranged an articulation agreement with secondary school(s) | _____% | 17 |
| h. Arranged an articulation agreement with universities | _____% | 20 |
| i. Established industry-education partnership agreements | _____% | 23 |
| j. Other. Specify: _____ | _____% | 26 |
| | TOTAL 100% | |

## VOCATIONAL EDUCATION SERVICES FOR SPECIAL POPULATIONS

### Handicapped Students*

24. In 1986-87, did the institution spend Perkins' Title IIA funds for handicapped students?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 27)..... |__|-2

25. What was the total amount of Perkins' Title IIA funds used by the institution in 1986-87 to support programs for handicapped students?

Handicapped Funds Spent in 1986-87: $_____.00 3

26. For the Perkins' funds for handicapped students reported in Question 25, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in regular vocational classrooms | _____% | 3 |
| b. Teachers or other staff for separate vocational classes for handicapped students | _____% | 4 |
| c. Modified or new vocational equipment | _____% | 4 |
| d. Consultation services | _____% | 4 |
| e. Guidance, assessment or counseling | _____% | 4 |
| f. Development or modification of vocational curriculum | _____% | 5 |
| g. Job placement services | _____% | 5 |
| h. Other. Specify: _____ | _____% | 5 |
| TOTAL | 100% | |

*"Handicapped" refers to both physical and mental handicapping conditions. Handicapped students include students who are mentally retarded, hard of hearing, deaf, speech or language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi-handicapped, or persons with specific learning disabilities; and who require special services and assistance in order to enable them to succeed in vocational education programs.

## Disadvantaged Students*

27. In 1986-87, did the institution spend Perkins' Title IIA funds for disadvantaged students?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 30)..... |__|-2

28. What was the total amount of Perkins' Title IIA funds used by the institution in 1986-87 to support programs for disadvantaged students?

Disadvantaged Funds Spent in 1986-87: $_____.00 6

29. For the Perkins' funds for disadvantaged students reported in Question 28, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in regular vocational classrooms | _____% | 6 |
| b. Teachers or other staff for separate vocational classes for disadvantaged students | _____% | 7 |
| c. Basic skills instruction in nonvocational classes | _____% | 7 |
| d. Guidance, assessment or counseling | _____% | 7 |
| | | 12-1 |
| e. Development or modification of vocational curriculum | _____% | 1 |
| f. Stipends or subsidized employment | _____% | 1 |
| g. Recruitment of out-of-school youth | _____% | 2 |
| h. Employability and/or job search activities | _____% | 2 |
| i. Child care services | _____% | 2 |
| j. Equipment | _____% | 2 |
| k. Transportation | _____% | 3 |
| l. Other. Specify: _____ | _____% | 3 |
| TOTAL | 100% | |

*Disadvantaged includes both academically and economically disadvantaged students who require special services and assistance in order to enable them to succeed in vocational education programs. Academically disadvantaged refers to a student who scores at or below the 25th percentile on a standardized achievement or aptitude test; whose grades are below 2.0 on a 4.0 scale; or who fails to attain minimal academic competencies. It does not include students with learning disabilities. Economically disadvantaged refers to an individual identified as low income by an indicator such as: annual family income at or below the poverty level established by the Office of Management and Budget; eligibility for Aid to Families with Dependent Children or other public assistance; or eligibility for Pell Grants.

Single Parent/Homemaker*

30. In 1986-87, did the institution spend Perkins' Title IIA funds for single parents/homemakers?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 33)..... |__|-2

31. What was the total amount of Perkins' Title IIA funds used by the institution in 1986-87 to support programs for single parents/homemakers? (INCLUDE ALL FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Single Parent/Homemaker Funds Spent in 1986-87: $_____.00

32. For the Perkins' funds for single parents/homemakers reported in Question 31, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in vocational classrooms | _____% | 4 |
| b. Teachers or other staff for separate vocational classes | _____% | 4 |
| c. Custodial or support staff to keep facilities open longer hours | _____% | 5 |
| d. Basic skills instruction in nonvocational classes | _____% | 5 |
| e. Guidance, assessment or counseling | _____% | 5 |
| f. Equipment | _____% | 6 |
| g. Student recruitment activities | _____% | 6 |
| h. Child care services | _____% | 6 |
| i. Transportation | _____% | 7 |
| j. Job placement services | _____% | 7 |
| k. Other. Specify: _____ | _____% | 7 |
| TOTAL | 100% | |

*"Single Parent" refers to an individual who is unmarried or legally separated from a spouse and has a minor child or children for whom the parent has either custody or joint custody. "Homemaker" refers to an individual who is an adult and has worked as an adult primarily without remuneration to care for the home and family, and for that reason has diminished marketable skills.

Adults*

12-13

33. In 1986-87, did the institution spend Perkins' Title IIA funds for adults?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 36)..... |__|-2

34. What was the total amount of Perkins' Title IIA funds used by the institution in 1986-87 to support programs for adults? (PLEASE INCLUDE FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Funds for Adults Spent in 1986-87: $_____.00 14-19

35. For the Perkins' funds for adults reported in Question 34, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Paraprofessionals/aides in vocational classes in school or other settings | _____% | 22 |
| b. Teachers or other staff for separate vocational classes in school or other settings | _____% | 25 |
| c. Custodial or support staff to keep facilities open longer hours | _____% | 28 |
| d. Basic skills instruction in non-vocational classes | _____% | 31 |
| e. Guidance, assessment or counseling | _____% | 34 |
| f. Equipment | _____% | 37 |
| g. Student recruitment activities | _____% | 40 |
| h. Child care services | _____% | 43 |
| i. Transportation | _____% | 46 |
| j. Job placement services | _____% | 49 |
| k. Other. Specify: _____ | _____% | 52 |
| TOTAL | 100% | |

*"Adults" include individuals who have graduated from or left high school and who need additional vocational education for entry into the labor force; unemployed individuals who require training to obtain employment or increase their employability; or employed individuals who require retraining to retain their jobs or training to upgrade their skills to qualify for higher paid or more dependable employment.

## Sex Equity*

36. In 1986-87, did the institution spend Perkins' Title IIA funds for sex equity?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 39)..... |__|-2

37. What was the total amount of Perkins' Title IIA funds used by the institution in 1986-87 to support sex equity programs? (PLEASE INCLUDE FUNDS FROM FORMULA-BASED, COMPETITIVE AND DISCRETIONARY AWARDS.)

Sex Equity Funds Spent in 1986-87: $_____.00

38. For the Perkins' sex equity funds reported in Question 37, please estimate the percentage of funds spent on each activity below.

| | Percentage of Funds | |
|---|---|---|
| a. Inservice staff development in sex equity | _____% | ( |
| b. Development or modification of vocational curriculum | _____% | ( |
| c. Active recruitment of students to nontraditional fields | _____% | ( |
| d. Salaries for staff to provide programs targeted to increase participation in nontraditional fields | _____% | 7 |
| e. Counseling and career development activities in nontraditional fields | _____% | 7 |
| f. Job placement services in non-traditional fields | _____% | 7 |
| g. Child care services | _____% | 1 |
| h. Transportation | _____% | 1 |
| i. Other. Specify: _____ | _____% | 2 |
| TOTAL | 100% | |

|12-1

*"Sex Equity" refers to programs, services and activities designed to eliminate sex bias and stereotyping of career options and educational programs.

Sex Equity (continued)

39. In 1986-87, did the institution expend funds from other sources (i.e., non-Perkins' funds) on any specific activities to promote sex equity in vocational education?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 41)..... |__|-2

40. Please indicate below the types of activities undertaken. (PLEASE CHECK THE BOX INDICATING "YES" OR "NO" FOR EACH ACTIVITY.)

| | YES | NO |
|---|---|---|
| a. Information to students to counteract stereotypes..... | |__|-1 | |__|-2 |
| b. Inservice staff development in sex equity..... | |__|-3 | |__|-4 |
| c. Adoption of bias-free curriculum materials..... | |__|-1 | |__|-2 |
| d. Active recruitment of students to nontraditional fields..... | |__|-3 | |__|-4 |
| e. Vocational education programs designed for students in nontraditional fields for their gender (e.g., women in fire-fighting program)..... | |__|-1 | |__|-2 |
| f. Hiring or placement of faculty in nontraditional fields for their gender..... | |__|-3 | |__|-4 |
| g. Counseling and career development activities in nontraditional fields..... | |__|-1 | |__|-2 |
| h. Specific job placement activities in nontraditional fields..... | |__|-3 | |__|-4 |
| i. Opportunity to meet individuals employed in fields nontraditional for their gender..... | |__|-1 | |__|-2 |
| j. Other. Specify: _____ _____ | |__|-3 | |__|-4 |

## COMBINING FUNDS

41. If the institution spent Perkins' IIA funds for either single parents/homemakers, sex equity or adults in 1986-87, were any of these funds combined to run joint projects?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 43)..... |__|-2

42. Please indicate which funds were combined for jointly funded projects by checking "yes" or "no" for each combination listed below.

| Perkins' Funds Combined | Yes | No |
|---|---|---|
| Single Parent/Homemaker and Sex Equity..... | |__|-1 | |__|-2 |
| Single Parent/Homemaker and Adult..... | |__|-3 | |__|-4 |
| Sex Equity and Adult..... | |__|-1 | |__|-2 |

43. In 1986-87, did the institution spend Perkins' Title III funds for consumer and homemaking programs?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 46)..... |__|-2

44. Were any of these funds combined with other Perkins' funds to run joint projects?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 46)..... |__|-2

45. Please indicate which funds were combined by checking "yes" or "no" for each combination listed below.

| Perkins' Funds Combined | Yes | No |
|---|---|---|
| Consumer and Homemaking with Single Parent/ Homemaker Funds..... | |__|-1 | |__|-2 |
| Consumer and Homemaking with Sex Equity Funds..... | |__|-3 | |__|-4 |
| Consumer and Homemaking with Adult Funds..... | |__|-1 | |__|-2 |

## UNSPENT FUNDS

46. If you were awarded Perkins' Title IIA Handicapped or Disadvantaged funds in 1986-87, please indicate below the dollar amount of these funds: (a) carried over into 1987-88, and (b) returned to the state in 1986-87.

| | a. Funds carried over into 1987-88 | | b. Funds returned to the state in 1986-87 | |
|---|---|---|---|---|
| Handicapped: | $ _____.00 | 43-48/ | $ _____.00 | 49 |
| Disadvantaged | $ _____.00 | 55-60/ | $ _____.00 | 61 |

(IF YOU HAD NO UNSPENT FUNDS IN EITHER CATEGORY, GO TO QUESTION 48.)

47. If the district had unspent Title IIA Handicapped or Disadvantaged funds in 1986-87, what were the primary reasons for not spending these monies? (CHECK ALL THAT APPLY.)

| Reasons for Not Spending Title IIA Funds in 1986-87: | Disadvantaged | Handicapped | |
|---|---|---|---|
| a. Program(s) did not start on time..... | ☐-1 | ☐-1 | 67 |
| b. Underenrollment of students..... | ☐-2 | ☐-2 | 69 |
| c. Accounting procedures too complex to demonstrate excess costs..... | ☐-3 | ☐-3 | 71 |
| d. Sufficient matching funds not available..... | ☐-4 | ☐-4 | 73 |
| e. Did not know what matching funds were available..... | ☐-1 | ☐-1 | 75 |
| f. Actual costs lower than original budget..... | ☐-2 | ☐-2 | 77 |
| g. Other. Specify: _____ | ☐-6 | ☐-6 | 79 |

FUNDS NOT AWARDED

48. In 1986-87, were you awarded funds in all categories of Perkins' Title II monies?

Yes (GO TO QUESTION 50)..... |__|-1

No (CONTINUE)..... |__|-2

49. If you did not receive Perkins' Title II funds in a particular category, what were the most important reasons why you did not receive these funds? (FOR EACH PROGRAM CATEGORY LISTED BELOW, PLEASE CHECK THE MOST IMPORTANT REASONS WHY YOU DID NOT RECEIVE FUNDS.)

| Reason Funds Not Received | Handi-capped | Disad-vantaged | Single Parent Homemaker | Sex Equity | Adult | Program Improvement | |
|---|---|---|---|---|---|---|---|
| Did not know about program..... | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | 1 |
| Not eligible for funds in this category..... | \|__\|-2 | \|__\|-2 | \|__\|-2 | \|__\|-2 | \|__\|-2 | \|__\|-2 | 2 |
| Application rejected..... | \|__\|-3 | \|__\|-3 | \|__\|-3 | \|__\|-3 | \|__\|-3 | \|__\|-3 | 2 |
| Did not apply: likely award not large enough to make it worthwhile..... | \|__\|-4 | \|__\|-4 | \|__\|-4 | \|__\|-4 | \|__\|-4 | \|__\|-4 | 3 |
| Did not apply: did not know what funds were available as matching funds..... | \|__\|-1 | \|__\|-1 | \|///\| | \|///\| | \|__\|-1 | \|__\|-1 | 3 |
| Did not apply: could not identify eligible students..... | \|__\|-2 | \|__\|-2 | \|///\| | \|///\| | \|///\| | \|///\| | 4 |
| Did not apply: could not meet matching of excess costs requirement..... | \|__\|-3 | \|__\|-3 | \|///\| | \|///\| | \|///\| | \|///\| | 4 |
| Did not apply: could not identify the excess costs..... | \|__\|-4 | \|__\|-4 | \|///\| | \|///\| | \|///\| | \|///\| | 4 |
| Did not apply: staff or other resources were insufficient to prepare proposals..... | \|///\| | \|///\| | \|__\|-1 | \|__\|-1 | \|__\|-1 | \|__\|-1 | 4 |
| Other. Specify: _____ _____ | \|__\|-6 | \|__\|-6 | \|__\|-6 | \|__\|-6 | \|__\|-6 | \|__\|-6 | 5 |

## VOCATIONAL EDUCATION AND THE JOB TRAINING PARTNERSHIP ACT (JTPA)

50. In 1986-87, did your district receive JTPA funds?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 55)..... |__|-2

51. Please write in the amount of each award below. (If no funds were received, write in "0".)

| | | |
|---|---|---|
| JTPA Title IIA Funds (Block Grant) | $ _____.00 | 6C |
| JTPA Title IIB Funds (Summer Youth) | $ _____.00 | 6E |
| JTPA Title III Funds (Dislocated Workers) | $ _____.00 | 12-13 14 |
| 8% Coordination Grants | $ _____.00 | 22 |
| Other JTPA Funds | $ _____.00 | 30 |
| Total JTPA Funds Received | $ _____.00 | 38 |

52. Were any of these funds used in activities related to vocational education?

Yes (CONTINUE)..... |__|-1

No (GO TO QUESTION 55)..... |__|-2

53. Are there separate classes for JTPA recipients?

Yes..... |__|-1

No..... |__|-2

VOCATIONAL EDUCATION AND THE JOB TRAINING PARTNERSHIP ACT (JTPA) (continued)

54. What activities, if any, took place through the coordination of JTPA programs and vocational education programs in your institution? (PLEASE CHECK ALL THAT APPLY.)

a. JTPA recipients taught by vocational education faculty..... |__|-1

b. Joint classes of JTPA recipients and vocational education students..... |__|-2

c. Sequenced coursework for JTPA recipients leading to eligibility for vocational education certificates/degrees..... |__|-3

d. Placement of JTPA clients in regular programs..... |__|-4

e. Remedial course work..... |__|-1

f. Job placement..... |__|-2

g. Career counseling and guidance..... |__|-3

h. Assessment of vocational skills and interests..... |__|-4

i. Other Specify:
_____ |__|-6

55. Does your institution accept funds that require recipients to meet performance objectives (e.g., performance-based contracts)?

Yes..... |__|-1

No..... |__|-2

56. If your institution does not accept funds because of performance objectives, what are the primary reasons for not accepting these funds? (CHECK ALL THAT APPLY.)

Reasons for Not Accepting Performance-Based Funding:

a. Institutional policy..... |__|-1

b. Not consulted about testing of performance standards..... |__|-2

c. Performance standards are unrealistic..... |__|-3

d. Magnitude of award not worth the risk if performance standards not met..... |__|-4

e. Other. Specify:
_____ |__|-6

ADDITIONAL COMMENTS:

THANK YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE.

PLEASE RETURN THE QUESTIONNAIRE TO ABT ASSOCIATES IN THE POSTAGE-PAID ENVELOPE PROVIDED.